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The Unconscious Mind

'Δοκιμαζετε τὸ καλὸν κατεχετε.'

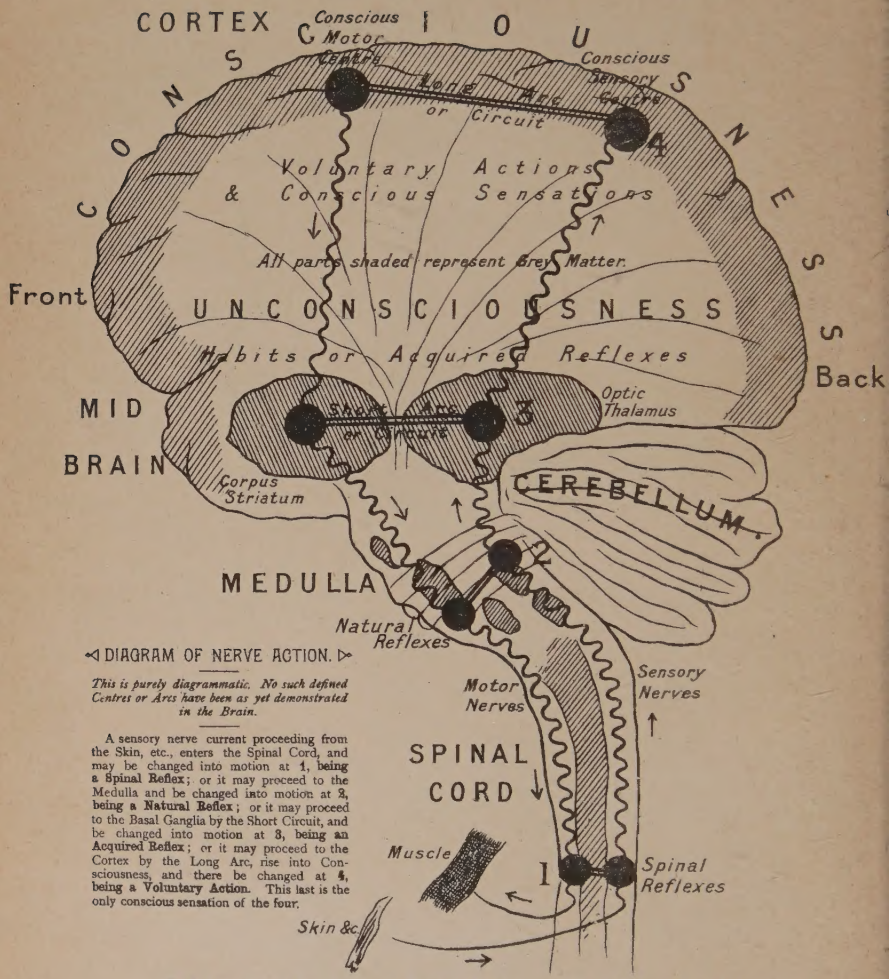

DIAGRAM OF SENSORI-MOTOR ARCS.

◁ DIAGRAM OF NERVE ACTION. ▷

This is purely diagrammatic. No such defined Centres or Arcs have been as yet demonstrated in the Brain.

A sensory nerve current proceeding from the Skin, etc., enters the Spinal Cord, and may be changed into motion at **1, being a Spinal Reflex**; or it may proceed to the Medulla and be changed into motion at **2, being a Natural Reflex**; or it may proceed to the Basal Ganglia by the Short Circuit, and be changed into motion at **3, being an Acquired Reflex**; or it may proceed to the Cortex by the Long Arc, rise into Consciousness, and there be changed at **4, being a Voluntary Action.** This last is the only conscious sensation of the four.

The Unconscious Mind

by ALFRED T. SCHOFIELD M.D.

M.R.C.S.

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1898

CONTENTS

PAGE

INTRODUCTORY ix

CHAPTER I.

On Mind below Man 1

CHAPTER II.

The Scope of Mind in Man 24

CHAPTER III.

The Conscious Mind 52

CHAPTER IV.

The Unconscious Mind 72

CHAPTER V.

The Relations of the Unconscious and the Conscious ... 98

CHAPTER VI.

The Unconscious Mind and Habit 121

DEC 27 1951

CHAPTER VII.

PAGE

The Unconscious Mind and its Qualities—Memory and Sleep 146

CHAPTER VIII.

The Unconscious Mind in the Child 169

CHAPTER IX.

General Principles of Unconscious Education 187

CHAPTER X.

The Unconscious Mind and its Detailed Education ... 210

CHAPTER XI.

The Unconscious Mind and Sensation 237

CHAPTER XII.

The Unconscious Mind and the Body Generally 252

CHAPTER XIII.

The Unconscious Mind and the Special Senses—I. Sight 266

CHAPTER XIV.

The Unconscious Mind and the Special Senses and Speech —II. Hearing, etc. 284

CHAPTER XV.

PAGE

The Unconscious Mind and the Muscular System 294

CHAPTER XVI.

The Unconscious Mind and its Action on the Heart, Lungs, Skin, Stomach; and in Sex and Reproduction 308

CHAPTER XVII.

The Unconscious Mind and Disease 325

CHAPTER XVIII.

The Unconscious Mind and Therapeutics, I. 352

CHAPTER XIX.

The Unconscious Mind and Therapeutics, II. 374

CHAPTER XX.

The Value of the Unconscious Mind 402

List of Some of the Books Quoted which are Helpful in Studying the Subject of "the Unconscious Mind" ... 419

Index 425

INTRODUCTORY

The object of this work is to establish the fact of an unconscious mind in man, and to trace in brief some of its powers and the various ways in which they are exhibited. We shall hope to show that this mind is the seat of character and of conscience and the spirit-life; the source of conduct, of instinct, of tact, and the thousand qualities that make us what we are; the home of memory, the ultimate governor and ruler of all actions and functions of the body, and in every way a most important factor in our psychical and physical life.

An attempt will be first made to trace something of the dawn of mind amongst lower animals, and then briefly to widen and deepen the radical conception of the meaning of the word "mind" as applied to man, so as definitely to include all unconscious psychic powers. Plan of book.

We shall then consider consciousness—so long the god of psychologists—what it is and what it

is not; and then turn our attention to the unconscious and show that it is probably the greater part of mind, consciousness being but the illuminated disc on which attention is riveted on account of its brightness, as if it were all, whereas we shall see in the shades around stretch mental faculties—deeper, wider, loftier, and truer.

We shall then trace the connection of the unconscious with the conscious, and the bearings of the one on the other; and shall next speak of unconscious mind and habit and its formation, the various qualities of the unconscious mind, and its action in memory and in sleep; and then we must consider the great question of the education of the unconscious mind in man, and seek to show that the truest education and formation of character in children must inevitably be based upon it and not on the conscious; and that the value of the ultimate man or woman actually depends upon the character and extent of this education.

We shall then touch briefly upon the connection of the unconscious mind with sensation, and its rule over the body generally, and then in detail its connection with special sensation, the

muscular system and the various other systems and organs of the body, including the question of sex and reproduction; and lastly, we must look somewhat carefully at it as a great power in disease and as a great agent in therapeutics, touching here on the question of faith and mind healing so closely connected with it, and concluding this monograph with a summary of its powers as established by evidence and observation.

If it is asked, why is this book written and this inquiry instituted? the answer is two-fold. First of all, on account of the great bearing of the question on many different branches of scientific research that are of practical interest. Secondly, because the whole subject-matter of it is hotly contested and vigorously denied by many scientists, at least in this country. As to its importance, the true definition of mind is the corner-stone of the foundation, or the key-stone of the arch, which supports the sciences of philosophy, metaphysics and psychology. Its enlarged conception as here attempted has a most practical bearing on at least two other great sciences with which the whole welfare of the race is bound up: the science of

Why this book is written.

education and child training for the formation of character, and the science of therapeutics.

Why not written before.

Those who have the patience to read the pages which follow will naturally ask why a subject so great and so momentous should have been so little discussed, and treated hitherto as of such small importance. The answer appears to be this: So many psychologists—the high priests of the religion of mind—being committed so generally to deny and refuse any extension of it outside consciousness, though they cannot refrain from what Ribot calls "a sly glance" at the forbidden fruit, consistently ignore the existence of the Unconscious, their pupils naturally treading in their steps; while the physician of the period, revelling in the multiplication and elaboration of physical methods of diagnosis and experiment, is led to despise and contemptuously set aside as "only fancy" those psychical agencies which can cure, if they cannot diagnose.

Previous attempts.

It may be asked, why was not an attempt made sooner to give these unconscious faculties their proper place? It *was* made determinedly years ago in Germany, and since then in England by men who, to their

honour, undeterred by ridicule and contempt, made noble and partially successful efforts to establish the truth. But it is only now that the pendulum—so long swayed over to the materialistic side of the world's clock, under the pressure of Huxley and Tyndall and others, whose great works on this side led all men for a time to forget almost that there was another—has begun to swing back; and men's ears are now open to hear, and their hearts to believe Spirit truths, especially when they are supported as they now are from the other side by the best physiologists. The psychological moment has, we trust, arrived for establishing the Unconscious on a firm and lasting basis, with the result that psychology will be rescued from the contempt into which it has fallen at the centres of learning, a contempt really due to adherence to an obsolete shibboleth; that medicine will occupy a higher and more philosophical position as it comprehends and gives due value to the psychical factor in disease and cure for the first time; while child culture will no longer remain the hap-hazard, capricious and contradictory task it has been, governed mainly by the maternal rule of thumb, but a reasonable and natural science, as it re-

cognises what it is that has to be trained, and the methods given us for its accomplishment.

Why undertaken by the writer.

The last question that will be asked is why the author, a medical man, undertakes all this. The importance of this question will sink to insignificance when once the book is read, for it will then be seen how laboriously it has been sought to establish every point and every statement on the authority of others, with the effect that the book well-nigh appears to be little more than a collection of extracts.

The writer himself claims no authority. He has been but the agent to collect and arrange the facts here given in an intelligible sequence, and he has been driven to this task from the simple fact that, being a physician in constant contact with nerve diseases and mental phenomena, he saw, for many years, the manifestation of unconscious powers he was forced to recognise as mental, and yet frequently he found the statement that they were so was received with doubt and ridicule. He was driven, therefore, to the further study of the phenomena of unconscious mind and also of writers in psychology and kindred sciences, with the result that he

found the whole subject in chaos, vigorously denied and scouted on the one hand, gravely asserted and, as it appeared to him, proved upon the other.

After much thought, the writer therefore came to the conclusion that it might be some slight service to his day and generation if he wrote a brief review of the entire subject in, as far as possible, other and more scientific language than his own, so as to bring before thoughtful and practical men, especially in his own profession, the question as to whether this was not indeed a study worthy of their serious thought and further attention.

If this present crude attempt therefore leads to this, and, above all, to the production of some scientific work on the subject by a more competent hand, the writer will be well rewarded.

141 Westbourne Terrace,
Hyde Park, W., 1898.

CHAPTER I.

ON MIND BELOW MAN.

A CLEAR concept of mind must be the basis of all true physiologico-psychical education, and also has a direct bearing in its issues on every stage of life; more particularly on those earlier periods when the character is formed. It is not too much to say that true education or true child-culture must be based on a full and broad concept of mind. And this is becoming of increasing importance from the great interest that is being taken in the development of children.

Enlarged concept of mind.

There can be no doubt that amongst psychologists the concept is changing and enlarging. The causal force at work is at present largely German, where the "new" is perhaps accepted as the "true" with a greater facility than with English scientists, who carry all their national stolidity and doggedness into their studies, and still move on stereotyped lines with proper reverence for established authority.

Investigations and inferences are more boldly pushed and more rapidly made abroad, and perhaps not unfrequently supplemented by that inner consciousness whose dicta are alike incapable of verification or proof.

We have, however, in England, notable exceptions to the rule of "follow-my-leader," whom we shall often quote, but whom at present it is needless to name.

Historically, distinguished men have from time to time striven to enlarge our concept, but with indifferent success, from the want of support from the physiological side, which only of late years has made much advance, and on which all future psychology must be increasingly based. A decided impetus, from an irregular but prolific source, has undoubtedly been recently given in the phenomena laid bare by hypnotism, and it is somewhat significant that all modern psychologists feel constrained seriously to discuss and examine these manifestations.

At the same time, deliberate efforts have not been wanting to check and ridicule all concepts of mind that exceeded the old time-honoured definitions, lest the new wine should burst the old bottles; while many physiologists, so far from extending our horizon, have sought gradually to limit all idea of mind to a function of matter. Thus, while there is generally a consent to extend our ideas in many quarters, they are limited in others, either by flat denial of a *non possumus* kind, or by physiological materialism—both, though the offspring of different schools, being probably expressions of the narrowness of our thoughts, compared with the breadth of our subject.

Without further preface, therefore, we will proceed to consider the relations of mind and matter. Such questions bristle with difficulties, and, like unpractised

navigators, when exploring the stream of knowledge, we must take especial care at the outset not to do more than survey at a distance those numerous rocks which project from either bank, on which we might early suffer shipwreck from the temptation to exceed our limitations.

Relations of mind and matter.

For instance, are the psychical and the physical the two Cartesian clocks, abysmally apart, which, when wound up, nevertheless correspond tick for tick? This position is well stated by Crichton Browne. He says: "These mental actions are incorrectly spoken of as the functions of the brain, for they certainly cannot hold the same relation to that organ that movement does to the muscles, or bile to the liver. Nothing can be derived from motion but another motion, nothing from mental process but another mental process; and thus the facts of consciousness can never be explained by molecular changes in the brain, and all that we can do is to fall back on an hypothesis of psycho-physical parallelism, which assumes concomitant variations in brain and mind. There is a physical universe, of which only a fragment is known to us. There is a psychical universe, in a corner of which we live and move and have our being. We may picture these to ourselves as circles which impinge on each other at the first moment of conscious existence, which intersect more and more as life goes on, their largest intersection (including but a small segment of each) being reached when life is at its full, which then withdraw from each other as old age sets in, and part company at death.

But whatever image we may adopt we must hold fast to the truth that mind and matter are distinct essences, irreconcilable in their nature, though mysteriously accordant in their operations; that only in the elementary processes of mind, made up of sensory and motor elements, has correspondence with physical changes in the brain been traced out."[1] Or shall we follow Professor W. James, when he says: "The simple and radical conception dawns upon the mind that mental action may be uniformly and absolutely a function of brain action as effect to cause"?[2]

"This conception," he continues, "is the 'working hypothesis' which underlies all the 'physiological psychology' of recent years." To adopt one theory is to be proclaimed a dualist; to adopt the other, a monist, and the former position is certainly to be preferred of the two; but neither contains the whole of the truth, though each contains a part.

Distance and connection between mind and matter.

For instance, the abysmal distance between mind and matter is shown in that, while "physical phenomena are phenomena in space, psychical phenomena are phenomena in time only,"[3] for it is a fundamental thought to grasp that mind cannot have a "seat," as it has not any extension in space, having no relation with it that we know of. It does not cover a surface or fill a volume. It is only related to time. In this we follow, of course, the popular assumption that time and space are essenti-

[1] Sir J. C. Browne, *Brit. Medical Journal*, 9th October, 1897.
[2] W. James, *Psychology*, p. 6.
[3] James Sully, *Human Mind*, p. 7.

ally different, neglecting certain wild speculations as to time being, after all, a spatial extension (in a fourth dimension).

The extent of the connection between mind and matter is indeed still unknown, though it has furnished material for discussion for centuries. Some, like Professor Clifford, make psychical action universal in matter, others, like Descartes, limit it to man only, while Schopenhauer, from a broader standpoint, says: "The materialists endeavour to show that all mental phenomena are physical, and rightly so, only they do not see that, on the other hand, every physical is at the same time metaphysical".

Our ignorance of the essence of things.

Lest, however, we should become dogmatic on these relations, we are reminded that the whole material universe may be, after all, but an inference of mind, and that matter and mind may not be two, but one, the former being in this view a projection of the latter, rather than the latter a function of the former.

Professor Herbert says: "The common supposition, then, that the material universe and the conscious beings around us are directly and indubitably known, and constitute a world of 'positive' fact, in which reason can certainly pronounce without any exercise of faith . . . is an entire mistake, based upon astonishing ignorance of the essential limitations of human knowledge, of which thinkers who lived in the very dawn of philosophy were perfectly aware. The fact is, we are equally obliged to transcend phenomena, and to put

faith in events and powers and realities which do not appear, when we recognise the past, or the distant, or the material universe, or the minds of men, as when we infer the existence of God and of the unseen world."[1]

Life and mind.

That life involves mind has, of course, like all else, been vigorously disputed and equally vigorously affirmed. "Life," says Professor Bascom, "is not force; it is combining power. It is the product and presence of mind."[2] No mechanical process can indeed ever adequately represent or account for the processes of life, and yet life is not in itself a force; it is a capacity to use force for unique ends.

The extent to which the word "mind" may be employed as the inherent cause of purposive movements in organisms is a very difficult question to solve. There can be no doubt that the actual agents in such movements are the natural forces, but behind these the directing and starting power seems to be psychic. "From the first movement," says Dr. R. Dunn, in the *Journal of Mental Science*, "when the primordial cell-germ of a human organism comes into being, the entire individual is present, fitted for human destiny. From the same moment matter, life, and mind are never for an instant separated, their union constituting the essential work of our present existence." Again, "one cannot forbear assuming in the vital process of each individual organism, an idea which continually

[1] Prof. Herbert, *Realistic Assumptions of Modern Science Examined*, p. 455.
[2] Prof. Bascom, *Comparative Psychology*, p. 58.

supports and renews the organism".[1] Carpenter goes further still. "The convertibility of physical forces and correlation of these with the vital and the intricacy of that nexus between mental and bodily activity which cannot be analysed, all leads upwards towards one and the same conclusion—*the source of all power is mind.* And that philosophical conclusion is the apex of the pyramid which has its foundation in the primitive instincts of humanity."[2]

Vital cell action.

Besides attributing vital cell action to mind, attempts have recently been made definitely to indicate the exact location, if not of mind, which has no space-extension, at any rate of its activity. The general idea undoubtedly is that the sphere of psychic action in cells is the nucleus. "The seat of consciousness, or at least of mind, is the nuclear plasm, *i.e.*, the chromatic granules are endowed with psychic power." "The brain or soul of the cell is the chromatin, as is now widely believed among cytologists. In it inheres the psychic and hereditary powers, and if it be removed from a cell, the rest of the protoplasm behaves automatically. The cell moves mechanically, cannot reconstruct itself, and finally wears down and decomposes. Chromatin has the power of interpreting stimuli, and its reactions are intelligently directed towards the preservation of its own life."[3] Chromatin or chromoplasm is the

[1] F. Kirchener, *Psychology*, p. 141.
[2] W. B. Carpenter, *Mental Physiology*, 4th edition.
[3] Prof. Nelson in *American Journal of Psychology*, vol. iii., p. 369. See also Grüben, *Beiträgen von Kanntniss den Physiologie und Biologie den Protozoen*, vol. i. See also *Stolnikow vorgänge in den Lebenzellen.*

stained part of the nucleus, which is made up also of a chromatic and a nuclear membrane.

The mind in protoplasm.

This action is apparently inherent, and in virtue of it, every organic being has the appearance of being self-constructed; there being an indwelling power, not only for purposive action in each cell, but for endless combinations of cell activities for common ends not at all connected with the mere nutrition of the single cell, but for the good of the completed organism.

"Even empirically," says Schopenhauer, "every being stands before itself as its own handiwork." "But the language of Nature," he adds, "is not understood, because it is too simple."

It would appear thus we cannot define where psychic action begins, for, however far we travel down in the scale of life, psychic action is seen. "Entirely ignorant as we are," Maudsley remarks, "we certainly cannot venture to set bounds to its power over those intricate invisible molecular movements which are the basis of all our visible bodily functions. . . . There are many more things in the reciprocal action of mind and organic elements than are yet dreamt of in our philosophy."[1]

"Unconscious processes of knowledge," says Soury, "are what we discover as the distant origin of the human understanding. I hold, with Paul Bert, that the psychological powers, in their most elementary forms, must be studied in the molecular movement of particles of protoplasm . . . all psychical processes

[1] Maudsley, *Mind and Body*, vol. i., p. 39.

are ultimately reducible to phenomena of molecular mechanisms."[1] Binet concludes that these actions are not the result of "cellular" (or protoplasmic) irritability, but have every appearance of choice, "the nucleus being the focal seat of life in all its forms".[2] All attempts of mechanical or chemical explanation of these movements are merely verbal. The entire cellular body embodies in itself all the functions that, in consequence of an ulterior division of labour amongst pleuri-cellular organs, have been assigned to distinct elements.

Descartes, on the other hand, as G. H. Lewes points out,[3] considers animals merely machines, and many others consider all vital phenomena below consciousness as merely mechanical, probably because, to them, mind or psychic action and consciousness are identical. Even Romanes requires consciousness as a proof of the presence of mind. He says: "Two conditions require to be satisfied before we even begin to imagine that observed activities are an indication of mind.

Animals not mere mechanisms.

"1. They must be displayed by a living organism.

"2. They must be of a kind to suggest the presence of elements which we recognise have the distinctive characters of mind as such, *viz.*, consciousness and choice."[4]

We trust, however, to be able to show that conscious-

[1] Jules Soury on the "Physiological Psychology of the Protozon," in *Revue Philosophique*, January, 1891.
[2] Binet, "Psychic Life of Micro-organisms," *Mind*, vol. xiv., p. 454.
[3] G. H. Lewes, *Studies in Psychology*, p. 23.
[4] G. Romanes, *Animal Intelligence*, p. 2.

ness is not an essential quality of mind, and certainly among these lower organisms the mechanical theory does not cover the ground even when consciousness cannot be assumed.

"The conception of mechanism," as Von Hartmann says, "does not exhaust the facts; but the performance of the mechanism, when it exists, always leaves something over to be performed by psychic action. Moreover, the fitness of the mechanism includes the fitness of its origin, and this again always remains the work of the soul."[1]

"The unity and connections of the organism cannot be in the individual substance or processes, but only in the power that harmonises them. Whether this vital power be called plastic soul or vital force, its existence is as little to be disputed as that of the mechanical and chemical forces."[2] "Mind [a very general term] may be predicated of all animal life in one sense or another; and we may also favour the view of Agassiz and others that a spiritual element is the organising cause in every embryo-cell, determining its development."[3]

Again: "It is a psychical power which, aided by the unconscious representation of the type and the means requisite for the end of self-preservation, brings about these circumstances, in consequence of which the perpetuation of the normal condition must ensue according to general physical and chemical laws. In every dis-

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 199.
[2] Kirchener, *Psychology*, p. 142.
[3] Prof. Barker (New York), *Formation of Habit in Man*, p. 34, Victoria Institute.

turbance this process occurs unless the power of the unconscious will in mastering its circumstances is too small, so that the disturbance induces a permanent abnormality or death."[1]

"The Cartesian doctrine that animals are walking automata, which merely ape us with the semblance of a psychical life, is looked upon to-day by every feeling man as an almost revolting error. How long will it be before our modern physiologists finally free themselves from the not smaller error in principle that the organic manifestations of life of the lower central organs of the nervous system are mere mechanical contrivances without any spark of inner life?"[2]

"Mind" in unicellular organism.

Regarding the unicellular organisms, Professor W. H. Thompson, in his Belfast address in 1894, says: "The amœba presents active and spontaneous movements, and here one not only meets with a power of choice, but also an intelligent consciousness in selecting food".

Maudsley observes: "An organism plainly has the power (call it intelligence or call it what you will) of feeling and eschewing what is hurtful to it, as well as of feeling and ensuring what is beneficial to it".[3]

Perhaps one instance of this may be given. Romanes observes: "No one can have watched the movements of certain infusoria without feeling it difficult to believe that these little animals are not actuated by some amount of intelligence. There is a rotifer whose body

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 149.
[2] *Ibid.*, vol. iii., p. 236.
[3] Maudsley, *Mind and Body*, vol. i., p. 7.

is of a cup shape, provided with a very active tail armed with strong forceps. I have seen a small specimen of this rotifer attach itself to a much larger one with its forceps, the large rotifer at once becoming very active, and springing about with its burden till it came to a piece of weed. It took firm hold of the weed with its own forceps, and began a most extraordinary series of movements to rid itself of the encumbrance. It dashed from side to side in all directions; but not less surprising was the tenacity with which the smaller rotifer retained its hold, although one might think it was being almost jerked to pieces. This lasted several minutes, till eventually the small rotifer was thrown violently away. It then returned to the conflict, but did not succeed a second time in establishing its hold. The entire scene was as like intelligent action on the part of both animals as could well be imagined. So that if we were to depend upon appearances alone, this one observation would be sufficient to induce one to impute conscious determination to these micro-organisms."[1]

"Wonderful is the instinct of the holothuriæ which live in the Philippine Islands of the South Sea. These devour coral sand; and if they be taken away from their native haunts, they of their own accord eject the whole of the digestive canal with all other organs connected therewith in order to form new viscera more in harmony with the altered media."[2]

Sir William Dawson says: "An amœba shows voli-

[1] G. Romanes, *Animal Intelligence*, p. 18.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 140.

tion, appetite and passion. One trying to swallow a one-celled plant as long as its own body, evidently hungry and eager to devour it, stretched itself to its full extent trying to envelop the plant. It failed again and again, but repeated the attempt until at length, convinced of its hopelessness, it flung itself away, and made off in search of something more manageable."

"There is not a single living being which, whether it knows it or not, does not, in so far as it lives and moves and keeps up its being, exhibits the fundamental quality of reason. Instinct means organic experience, while reason is instinct in the making. An instinctive creature is a creature formed with functions without further nerve structure to undergo further formation, hence is not capable of progress."[1]

However strongly such illustrations as these prove the presence of psychic force, all may not be agreed as to the question of consciousness. By some it is assumed, as we have said, to accompany all psychic action.

Is there consciousness.

Pflüger[2] considers consciousness of some sort, however obscure, must be ascribed to the lower animals when it is seen how in them action varies with circumstances for the greater possible benefit of the system. "Whether," he proceeds, "every cell in the body has its beneficial or purposive work guided by some faint glimmer of consciousness is a question not to be answered." Hartmann says: "The central consciousness is by no means

[1] Maudsley, *Mind*, vol. xii., p. 512.
[2] Pflüger, *Teleological Mechanism of Life*.

the sole consciousness of the animal. The subordinate nerve-centres must also have a consciousness but of a vaguer description following from the continuity of the animal series."[1] Professor Schmidt boldly states that unconscious mind is in plants, consciousness in animals, and self-consciousness in man. Fechner, Schopenhauer, Ed. von Hartmann and many others also speak of the unconscious psychical activity of plants.

That unconscious psychic action is to be attributed to plants seems a little startling and need not be here pressed, but, on the other hand, we think it must be admitted in all animals.

Dr. Noah Porter says: "The first acts of life, whether they pertain to body or soul, are unconscious,"[2] and when Herbert Spencer says: "Reflex action is the lowest form of psychical life,"[3] he thereby tacitly admits unconscious mind-action in animals.

Instinct and intelligence.

When we proceed higher in the scale another question arises with regard to instinct and intelligence; but again we are confronted with the inscrutable problem of the connection of the two, and the origin of the former.

In the *Revue Scientifique*, 4th May, 1889, an account is given of the "formation d'un instinct," to the effect that every evening for ten years (beyond which the narrator's observation did not go) a flock of geese manifested wild terror at a place and twilight hour coincident with a murderous attack that had once been

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 60.
[2] Dr. Noah Porter, *The Human Intellect*, p. 100.
[3] Herbert Spencer, *Principles of Psychology*, vol. i., p. 428.

made on them by dogs, although all the older members of the flock had been killed off every year for market.

Consider an illustration given us by Romanes from a class by no means renowned for instinct or for intelligence. "Sticklebacks swim quietly about amidst rapacious pike which do not attempt to attack them; for if by oversight a pike even actually attempts to swallow a stickleback, the latter with its projecting dorsal spines sticks in his throat; and the pike must infallibly die of hunger, and accordingly cannot transmit his painful experience to posterity."[1]

Instincts of insects.

Proceeding one step higher to insects, their instinct or intelligence is summed up by Professor Lindsay in the following fifteen psychic phenomena :—[2]

1. Co-operation for a given purpose.
2. Division of labour, working by turns, and relief parties.
3. Obedience to authority, including language of command.
4. Understanding a language (often of touch).
5. Organisation of ranks and military discipline.
6. Knowledge of possession of power and use of it; subjection of the weak by the strong.
7. Judicial punishment of disobedience or rebellion.
8. Forethought, real or apparent.
9. Practice of agriculture, havest and storage.
10. Respect for and interment of dead.
11. Mourning in bereavement, or its resemblance.
12. Funeral ceremonies, including processions.
13. Use of natural tools, instruments and weapons.
14. Passions of rage and anger.
15. Imagination and its derangement by hypnotism.

[1] Romanes, *Animal Intelligence*, p. 99.
[2] Lindsay, *Mind in Animals*, chap. vi.

Instinct and intelligence.

Now, how far are these phenomena of instinct and how far of intelligence? Romanes asks, "Do they speak to us of a lapsed intelligence that, having by long use formed all needed habits, has ceased to act when these have been crystallised into instinct?" "This question," he says, "is unanswerable in our present state of knowledge." It has, however, been vigorously answered by Professor H. W. Parker of New York. "I would protest that instincts, spoken of doubtfully as voluntarily acquired habits, or, as Romanes suggests, 'speaking to us of lapsed intelligence,' offer no evidence of so originating." "It seems to me that the fatal lack of proof of any such origin, and the impossibility of it in the light of both mental and biological science, is just what our present knowledge gives!" Maudsley's suggestion is helpful in the difficulty. He says: "It is a question whether intuition, fundamental ideas, mental aptitudes, etc., have not been acquired by experience, not of the individual, but of the race".

Darwin's view is that instinct began in chance acts favourable to the perpetuation of species; though this and all solutions besides hereditary transmission hardly cover such a case as that we have adduced among fish. We will give one or two more.

Pflüger touched with acetic acid the thigh of a decapitated frog. It wiped it off with the foot of the same side. He then cut off the foot and re-applied the acid. The frog tried to wipe it off with the stump, but could not. After some fruitless efforts it ceased, but

seemed unquiet, and at last made use of the foot of the other leg and wiped off the acid.[1]

With regard to this, Von Hartmann remarks: "The physiologist causes the beheaded frog to make a movement of contraction and thereby obtains evidence that the simple reflex action rests on a mechanism; and the psychologist sees the reflex act and has a conviction that reflexion is a psychical process in which volition uniformly follows on sensation".[2]

Du Bois Raymond says: "With awe and with wonder must the student of nature regard that microscopic molecule of nerve-substance which is the seat of the laborious, constructive, orderly, loyal, and dauntless soul of the ant!"

Huber says: "On the visit of an overseer ant to the works where the labourers had begun the roof too soon, he examined it and had it taken down, the wall raised to the proper height, and a new ceiling constructed with the fragments of the old one". Illustrations of instinct.

Romanes shows the sphex wasps provide animal food for their young which they paralyse but do not kill. Crickets have three nerve motor centres to be paralysed; one behind the neck, which has to be stretched to get at it, and two in other minute points in the body, yet all these are unerringly punctured by the wasp. He adduces this as a specimen of supposed "lapsed intelligence".

A spider with a big fly could not secure it, so bit one

[1] Maudsley, *Physiology of the Mind*, p. 138.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 226.

of its legs, and as the fly stooped its head to its leg, at once secured it with cords thrown over it.

Birds go through elaborate dramatic performances when their nests are approached, and insects often simulate death.

Some jackdaws tried to build a nest on a sloping window sill outside a church, but the sticks all slipped down, so in five days they constructed a pyramid of sticks resting on a step six feet below and reaching up to the sill to support the nest on which they built it.

Von Hartmann gives the following, which has however, we believe, been queried. "The cuckoo lays eggs in colour and marking resembling the other eggs in the (strange) nest. It may be thought this is because the cuckoo sees the other eggs, but the explanation does not meet the case of nests hidden in hollow trees (*e.g.*, *Sylvia phœnix*). In this case the cuckoo can neither slip in nor look in. It must even deposit its egg outside and put it in with its beak. It can thus not at all conceive by its senses how the other eggs in the nest look. This can only be due to unconscious clairvoyance."[1]

These instances suffice to show, when nerve-centres exist, how much the actions we loosely term instinctive resemble the results of human reason. Possibly when no nerve-centre whatever exists, the actions are purely reflex or automatic, but close observers find it hard to believe this is so in higher animals.

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 106.

"Adaptation to environment is usually a slow process extending over countless generations, but here also the same causes, *inter alia*, may be at work. Moreover, rapid changes do sometimes occur. Thus the beautiful experiments of Mr. Poulton, F.R.S., have shown that certain caterpillars can more than once in their lifetime change their colour to suit their surroundings. Thus, if one half of a set of certain green caterpillars have black twigs placed among the leaves on which they feed, and if the other half have some white paper spills placed among the leaves, most of the former will become black and of the latter white. The nervous stimulus which produces these different pigmentary deposits appears to be excited by the particular colour acting upon the surface of the skin. But through what wonder-working power is the change brought about? Not, of course, through any conscious action of the caterpillar, for the pupæ of these same caterpillars undergo a like change, changing even to a golden appearance, with a brilliant metallic lustre, when the chrysalis has been formed and allowed to remain on gilt paper! Does it not seem that these colour-changes, and possibly certain other colour-changes in the animal kingdom, the cause of which is still obscure, may possibly be reflex actions excited by a suggestion derived from the environment?"[1]

Instinctive adaptations of colour and form.

We find still more remarkable instances of natural instinct given by Drummond in his work on *African*

[1] Prof. Barrett (Dublin), *Humanitarian*, 1895.

Natural History. We see also the *Kallima inachis*, a brown butterfly, so like the brown tree leaf when folded up, that, even when warned, the eye is deceived by the trick; or the *Phasmidæ*, just like dry sticks; or the *Pyrops tenebrosus*, exactly resembling the curled dead foliage; or the *Œdipoda fasciata*, which precisely imitates the bark of the trunk on which it resides, thus escaping all its keen enemies; or the caterpillar of *Eunomys tillaria*, so closely reproducing the semblance of a twig that a bird perching close by is beguiled.

Mental evolution in animals.

Returning to instinct generally: "Instinct," says Dr. Porter, "is a blind unconscious force; it is not knowledge".[1] "Herbert Spencer regards instinct as compound reflex action, the precursor of intelligence. Reflexes and instincts are inherited mental traits; reason is acquired and is now heritable."[2]

"Instinctive actions include all in which there is a psychical striving towards the preservation of the species without consciousness of the end of this striving."[3]

In Dr. Romanes' curious chart of mental evolution in animals there are fifty provisional steps or levels. On the twenty-first we have fish and batrachia, with "association by similarity"; on the twenty-second the higher crustacea, with "reason"; on the twenty-fourth, hymenoptera, with "communication of ideas"; on the twenty-sixth, carnivora, etc., with "understanding of

[1] Reid, *Present Evolution of Man*.
[2] Prof. Schneider, *Mind*, vol. viii., p. 128.
[3] Dr. Noah Porter, *Human Intellect*, p. 176.

mechanism"; on the twenty-eighth, ape and dog, with "indefinite morality". Abstraction begins just below the twenty-seventh, generalisation at the twenty-ninth, and reflection at the thirty-fourth. But every one of these is implied in the twenty-first, if that be a noting and notion of qualities by comparison, in other words, by abstracting these.

"There is not," says Maudsley, "a single mental quality which man possesses, even to his moral feeling, that we do not find the germ in more or less full display in animals. Memory, attention, apprehension, foresight of ends, courage, anger, distress, envy, revenge and love of kind."[1]

We also get a quality unconsciously exercised in animals which is practically unknown amongst men, that is the sense of direction. We have no room for dog stories here, but one illustration of this must be given. My own dog, a Borzoi, was brought from Shoeburyness to my house in Westbourne Terrace near Hyde Park, and kept there two or three days. He was then taken down by my coachman to Hanwell by train, and chained in a yard. Next day he broke loose and came straight back to the Terrace, never having travelled the road or district except when he went down by train. Of course such stories are innumerable. We will give an amazing instance of animal intelligence from an account of the elephant in the Lao States of Northern Siam engaged in timber work, as recorded in the *Strand Magazine* for April, 1897.

Intelligence in higher animals.

[1] Maudsley, *Physiology of the Mind*, p. 512.

"Other elephants actually feed the circular saws in the mill, and so marvellous is their intelligence that an astute little tusker was observed to cease the pressure on his log, withdraw it anxiously, and then offer another part to the revolving saw, which was formerly going crookedly through the log.

"It sounds strange to say that these elephants are very human, but it conveys exactly what we mean. We are assured that at the sound of the dinner bell the sawmill elephants will instantly drop their logs and scamper off, screaming with glee at the welcome respite. They will refuse absolutely to tackle a log which they consider too heavy, but if the mahout insists they may possibly call one of their mates to lend a 'hand'.

"The stacking of the squared logs is wonderfully interesting to witness. An elephant has brought his log near the stack, and is picking up one end to place it on top. He finds he has not brought it quite near enough, however. Like the skilled labourer that he is, he requires no orders from the foreman above him. He calculates the distance with his eye. He walks round to the end of the log, applies his trunk and tusks thereto, and gives a mighty push.

"Once more he goes back to judge the distance. 'Just right.' He next places one end of his log on the stack, and then goes to the other end on the ground. This, too, is lifted and the whole log pushed home triumphantly.

"A heavy trailing chain is sometimes fixed to elephants that are turned loose to feed in the jungle at

night; this is in order that wanderers may be traced by the trail left by the chain in the jungle. Well, it has been known that when an elephant has 'made up his mind' to bolt, *he has carefully gathered up the tell-tale chain and carried it for miles on his tusks!*"

Instinct is unconscious psychic action.

We fear a solution that will meet all difficulties with regard to the extent to which this amazing "instinct" may be called reason has yet to be discovered. Meanwhile we may accept the broad statement that instinct is unconscious psychic action. "As in human ideation," says Kirchener, "we find in instinct the same action, unconscious and yet purposive, whose consequence is indeed much more certain than that of human ideation."[1]

Hartmann defines instinct as "Purposive action without consciousness of the purpose".[2] He points out, too, in the spirit of philosophical poetry, its sexual character as follows, in a statement that, we fear, rests on a very slender foundation of fact, and that the modern development of woman is rapidly rendering wholly untrue. "Woman is related to man as instinctive or unconscious to rational and conscious action. Therefore the genuine woman is a piece of nature on whose bosom the man estranged from the unconscious may repose himself, and again acquire respect for the deepest, purest spring of all life!"

A choice example of German mystic sentimentalism!

[1] Kirchener, *Psychology*, p. 138.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. xi., p. 79.

CHAPTER II.

THE SCOPE OF MIND IN MAN.

LEAVING now these perplexing and yet unsolved problems that surround the threshold of our inquiry, let us pause for one moment to consider the present position of the science known as psychology to our subject.

What is psychology.

The word "psychology" is itself comparatively a new word. In the seventeenth century the science was always called "metaphysics," and no other word is used by Descartes, Malebranche and Leibnitz. The word "psychology" was really invented by an obscure writer called Goelemus.

Its definition given by Professor Ladd and quoted by Professor James is "the description and explanation of states of consciousness as such".[1] "In this definition it assumes, as true, two peculiar data: (1) Thoughts and feelings or whatever other names transitory states of consciousness may be known by. (2) Knowledge, by these states of consciousness of other things."[2]

The trouble is that these data on which all is built are not themselves secure. "Every one assumes that we have direct introspective acquaintance with our thinking activity as such. . . . Yet I must confess that

[1] W. James, *Psychology*, p. 1. [2] *Ibid.*, p. 2.

for my part I cannot feel sure of this conclusion. . . . It seems as if consciousness as an inner activity were rather a *postulate* than a sensibly given fact, the postulate, *viz.*, of a *knower* as correlative to all the *known*. . . . When, then, we talk of 'psychology as a natural science' we must not assume that that means a sort of psychology that stands at last on solid ground."[1]

Professor Ed. Montgomery goes even further; condemning, *in toto*, Ladd's definition of the word. "Psychology as a science of self-originated and self-acting conscious existence rests on eminently fictitious assumptions and can only lead to nihilistic results. Such a science, constructed without reference to an abiding *extra-conscious* source of actuation and emanation, will end in vacancy; our own conscious content being brought into existence by extra-conscious powers and processes."[2]

"So impressed have some psychologists been with the inspiration of unconsciousness in their explanation of the mental phenomena, that but for their acceptance of the traditional definition of psychology as the science of the facts of consciousness it seems to me they could hardly have fallen, as they have done, into the contradictions and confusions which beset this question."[3]

Psychology is, indeed (until lately), so fettered and bound by its arbitrary limitations in the discussion of states of consciousness that it is thus described (or

[1] W. James, *Psychology*, p. 467.
[2] Ed. Montgomery, *Mind*, vol. xiv., p. 499.
[3] G. H. Lewes, *Problems of Life and Mind*, third series, p. 160.

decried) by James: "Psychology is but a string of raw facts, a little gossip and wrangle about opinions; a little classification and generalisation on the mere descriptive level, a strong prejudice that we *have* states of mind, and that our brain conditions them; but not a single law in the sense in which physics shows us laws. At present, psychology is in the condition of physics before Galileo and the laws of motion, or of chemistry before Lavoisier."[1]

Its present condition.

We have purposely paused over this word "psychology" and given these extracts in order that our temerity may not be deemed so excessive in endeavouring to overthrow its most cherished dogma, and to enlarge our concept of the word "mind".

After all not only have we a house divided against itself but one in a state of chaos: a science bristling with contradictions, its greatest agreement being in the general proposition that consciousness and mind are one and the same; the sphere of the latter being entirely defined by the extent of the former, so that to speak of unconscious mental phenomena is said to destroy the meaning of words, to betray confusion of thought, and, as a matter of fact, to talk nonsense. It is this proposition and no less that we seek to overthrow, it is these bonds that we hope to burst, in the firm belief that it is mainly for want of a broader basis, and on account of this rigid adherence to this narrow and, we may say, effete shibboleth that psychology has

[1] W. James, *Psychology*, p. 468.

not made a greater advance and reared a more imposing structure.

The way will be better prepared for the consideration of the connection of mind with consciousness if we briefly touch upon two points; first, the connection of mind and brain, and, secondly, the various mental qualities connected with their action, and constituting our personality.

It is confessedly very difficult to draw the line between mind and matter in the human brain.

Connection of mind and brain.

The intelligible connection of the two is well expressed by Dr. Browne. "The great character of current opinion appears to be that wherever there is nerve there is psychical function, actual or potential, which may rise within the range of consciousness. Not only is there apparently inseparable connection during life between the nervous structures and mental phenomena, but the latter are clearly dependent on the former. The ordinary condition of the nervous system is like that of a moderately charged battery that can be discharged by the completion of the circuit and re-charged by the blood. The will can complete the charged circuit. Mental causes can produce effects and physical causes mental effects."[1] "We have every reason to believe," says Professor Bain, "that, with all our mental processes, there is an unbroken natural (physical) succession." Herbert Spencer says: "No thought, no feeling, is ever mani-

[1] Dr. W. A. F. Browne in *Journal of Mental Science*, vol. xii., p. 321.

fested save as the result of a physical force. This principle will before long be a scientific commonplace."[1]

Distinction between mind and brain.

Having thus marked the intimate connection and interdependence of mind and brain, we must, to keep the balance of truth, equally insist on the radical distinction between the two. "The intelligence of man," says Calderwood, "as known in personal consciousness, is of a nature entirely distinct from any sensory apparatus. Mind is not a product of cerebral evolution."[2]

Again Herbert Spencer sounds a timely note of warning. "Here indeed we arrive at the barrier which needs to be perpetually pointed out alike to those who seek materialistic explanations of mental phenomena, and to those who are alarmed lest such explanations may be found. The last class prove by their fears almost as much as the first prove by their hopes, that they believe that mind may possibly be interpreted in terms of matter, whereas . . . there is not the remotest possibility of so interpreting it. For the concept we form of matter is but the symbol of some form of power absolutely and for ever unknown to us. Mind is also unknowable, and the simplest form under which we can think of its substance is but a symbol of something that can never be rendered into thought. Nevertheless, were we compelled to choose between translating mental phenomena into physical phenomena, or of

[1] Herbert Spencer, *First Principles of Psychology*.
[2] Prof. Calderwood, *Relations of Mind and Body*, p. 307.

translating physical phenomena into mental phenomena, the latter alternative would seem the more acceptable."[1]

Divisions of the brain.

It may not be out of place here, having touched upon the connection of mind and brain, to give a brief description of the latter as far as it throws light on mental activities.

For this purpose then besides the obvious divisions of the brain into greater and lesser, or cerebrum and cerebellum, and into two halves right and left, we may divide the cerebrum into three regions, consisting from above downwards of cortex or surface brain, basal ganglia or mid-brain, and medulla or lower brain, each of these containing a large proportion of the active agent in brain work known as grey matter, which consists of masses of brain cells.

The medulla or lower brain connects the spinal cord below with the mid-brain above, and is "the co-ordinating centre of most associated movements".[2] It is in fact the organising centre for carrying on all the processes connected with the passive or vegetative life of the body as contrasted with the active or animal life. All the processes carried on here are far below the level of consciousness.

The basal ganglia of the mid-brain are principally three in number; the *corpora quadrigemina*, connected with sight; the *corpora striata*, undoubtedly with motion, and the *optic thalami*, probably with sensation.

[1] Herbert Spencer, *First Principles of Psychology*, 2nd edition, p. 63.
[2] D. Ferrier, *Functions of the Brain*.

In this mid-brain we see the organisation of the functions of animal life subject to or of an inferior order to the highest centres and conducted without consciousness.

Lastly, we come to the cortex or surface brain, the seat of conscious mental life and the source of all voluntary actions.

The cortex is the seat of conscious sensation, though we are by no means conscious of all that takes place even in the cortex; for innumerable sensations may, and probably do, continually reach it of which we are wholly or partially unconscious; in many cases, of course, this is accounted for by non-attention. On the other hand, it would appear from recent researches that it is not possible to be conscious of any currents that do not reach the surface of the brain. (*See diagram.*)

With regard to there being two hemispheres right and left, Gall, Spurzheim, Dr. A. L. Wigan, Sir H. Holland, Hughlings Jackson and Brown Séquard conclude we have two brains united for common action, and that we have probably two minds acting normally in perfect harmony, but which can and do act separately in many conditions.

Cell actions and nerve paths.

When a nerve cell acts (whatever this means), impulses tend to pass off from it along its various connected nerve fibres, and the force and number of these impulses depend on the violence of the cell action; if this is gentle there may be only a slight impulse passing off through the largest connecting fibre (the freest channel); if the action is

violent it may overflow through the various connecting fibres in any direction.[1]

Further, regarding the neuron, or the cell and its fibres, the following is now known.

"It has been hitherto believed that they (the nerve fibres proceeding from the brain cells) join, and, joining, constitute continuous paths through the grey matter by which the nerve impulses pass from cell to cell, from group to group, and ultimately from one far-reaching fibre to another. And that which this method (of Golgi) has shown is that union cannot be traced, but what is everywhere to be perceived is that these 'branching' processes, 'dendrons' or 'dendrites,' as they are termed, end in the ground substance or matrix, as it may be termed, in which the cells lie. In this matrix only the dimmest trace of structure can be seen, and yet there must be an arrangement of its elements." "There is thus discontinuity where there was supposed to be continuity. All nerve fibres, as you know, are prolongations from nerve cells. They belong to the cell and are part of it, so that now there arises before us the vision of a series of discontinuous elements, each consisting of a cell with its processes, and the

New discoveries.

[1] It appears that by means of Golgi's methods of silver staining brain cells the following facts are established. Each cell has a mass of small branching fibres called dendrites, and one large axial fibre called a neuraxon, which soon becomes medullated. The cell with its fibres is called a neuron, and with regard to it it appears that the molecular movements in the dendrites are towards the cell and in the neuraxon from it, or afferent and efferent; and it is generally the terminal of a neuraxon that is connected with a dendrite. This gives an anatomical basis for the psychic acts of feeling, voluntary motion and association, etc. (See Sir M. Foster in *Brit. Med. Journal*, 21st August, 1897.)

processes do not join. To each of these elements the word 'neuron' has been applied. Yet the nerve impulses pass from one to another; they pass, therefore, by some unseen path through the matrix in which the processes end."

Nerve fibres pass through the cells.

"Max Schultze observed also the passage of the fibrils (of which the supposed homogeneous axis cylinder of nerves is now proved to be composed) through the (brain) nerve cells without any interruption. That has also been securely demonstrated and proved by the new method of Golgi. So that we have this astounding transformation in that which we know of nerve mechanism; we have in every axis cylinder a bundle of separate conducting fibrils, and we have those fibrils passing uninterruptedly through the nerve cells to the branching processes, and ending at the terminations of their branches. From that discovery there follows a most momentous fact which is of signal importance to us, and yet which seems imperfectly recognised by those who are working at the subject. Those fibrils passing continuously through the cell body can only conduct through the cell body. Our old conception, so simple, so attractive, that the nerve impulses originate in the cells—fascinating from the analogy of the cell body to a tiny battery originating a current—all that entirely disappears. Moreover, if we find this continuity of the fibrils distinct in some cases, we feel at once that it is one of those fundamental structural arrangements which must be universal, and we must once for all give up

the idea that the nerve cells are sources of nerve impulse."[1]

To return: "The will determines, but the automatic apparatus executes. First the ideal and motor centres in the cortex; then the automatic action of the *corpora striata*. Impulse is transmitted thence, through the anterior tracts of the *crura cerebra*, the anterior pyramidal columns, and anterior portion of the olivary bodies and anterior columns of the spinal cord."[2]

Sensori-motor nerve arcs.

It appears that, apart from the cortex, the nerve paths in the lower parts of the brain consist of sensori-motor arcs, the nerve currents arriving at the hinder part of the brain by the posterior part of the cord, and leaving the anterior ganglia, notably the *corpora striata*, and descending down the front of the spinal cord, in the resulting motor impulse. To use now the words of Dr. Hill: "On these arcs, which collectively make up the lower system, are superadded arcs, the loops of which lie in the higher grey matter (of the cortex). At the same time, therefore, that an impulse flows across the spinal cord as a simple reflex action, a certain part of this impulse is also diverted to the brain along fibres which ascend in the outer part of the spinal cord; and from the brain descending fibres carry the impulse back again to the lower arc. One thing is quite certain, namely, that the routes which are the most frequently used are the most open, and therefore the most easily traversed."[3] (*See diagram.*)

[1] Sir W. R. Gowers in *Brit. Med. Journal*, 6th November, 1897, p. 1359.
[2] Hack Tuke, *Influence of the Mind on the Body*, vol. ii., p. 145.
[3] Prof. A. Hill, Cantab., Paper on "Reflex Action," *Victoria Institute Proceedings*, 1893.

All this means, speaking generally, that a nerve current arriving at the brain may take one of three courses—either directly originating unconscious action in the lower brain ; or, travelling in a short arc by the mid-brain, produce unconscious action there ; or, proceeding further in a long arc by the cortex, end in conscious action. In connection with this it may be observed that the cranial nerves have all two deep origins, the one in the basal ganglia of the mid or unconscious brain, and the other in the cortex or upper conscious brain.

This is graphically and simply shown by the letter "A," where 1 and 1*x* are respectively the origin of the

afferent current and the terminus of the efferent, 2 and 2*x* the afferent and efferent unconscious mid-brain centres, and 3 and 3*x* the conscious cortical centres. The mid-brain short circuit is shown by the bar from 2 to 2*x*. Thus a current may travel from 1 to 1*x* by 2 and 2*x* unconsciously, or by 3 and 3*x* consciously. It

is clearly understood, however, that these "arcs" are purely hypothetical.

Will power is not controlled by sensation.

It only now remains for us very briefly to touch on the action and qualities of mind before reaching in conclusion the question with which we started: Is mind limited by consciousness? First of all then with regard to the old classical question as to whether the "mind" which we have seen is so inseparably associated with nerve cell action, is the player or the tune of the harp, the rower or the motion of the boat—the harp and boat being both the nerve cells in question.

Professor E. Montgomery of California concludes: "We are unhesitatingly certain that our movements are not directed and controlled by the peripheral stimulation of sensory elements. In shaping our actions we are not slavishly executing the immediate promptings of our actual environment. This is so palpable a truth that no serious doubt concerning the same has ever gained or ever can gain ground."[1] The existence of the will is proved by knowledge and experience. The consciousness of effort as well as purpose in will when running counter to prompting sensations is strong proof (in spite of explanations) of its real existence. Carpenter says: "It is clear the will is different from the general resultant of the automatic activities of the mind; for in the first place all alcoholic stimulants excite the automatic activity of the mind while

[1] E. Montgomery in *Mind*, vol. v., p. 23.

diminishing the power of the will".[1] No doubt, however, a large part of the mind runs in grooves, which, though they may be unknown and unfelt, are none the less real. The lines of mental function are in many respects as definite as the lines of instinct in bees or ants.

The three great divisions of the mind generally laid down by psychologists of feeling, knowing, and willing, first came from Germany before the days of Kant.[2]

Professor Dunn traces the evolution of the three. "At birth the nascent consciousness becomes awakened, purely sensational at first; and emerges step by step from self-consciousness to world-consciousness, and through the ideational and emotional up to the intellectual."

Unconscious source of conscious powers.

This, however, practically traces the rise of our mind to unconscious origins, and indeed all willing, thinking, and feeling are ultimately based on unconscious springs and trains of thought and motion. Even when developed, many mental qualities seem partly or wholly unconscious. Let us enumerate a few. *Intuition* may be conscious or unconscious. *Perception* is an example of conscious intuition. *General synthesis* may be conscious or un-

[1] Carpenter, *Mental Physiology*.

[2] By these, and by these alone, we direct and control the main expenditure of life and force. This, however, is not done so much by reason as by feeling—it is in the heart, not in the head, as Dr. Maudsley points out, that our deepest feelings are rooted, and he does ill service to the religious faiths who strives to base them on the feeble apprehensions of human reason; the driving impulse by which men are moved to act comes from feeling rather than reason.

"A psychology," he says, "which finds the motive power in reason might be likened to a science which finds the power for the tidal movements not in the moon but in the moonshine."

conscious; some can say why they think so and so, others cannot.

Kant says: "Innumerable are the sensations of perception of which we are not conscious, although we must undoubtedly conclude that we have some obscure ideas, as they may be called (to be found in animals as well as in man). The clear ideas indeed are but an infinitely small fraction of these same exposed to consciousness. That only a few spots in the great chart of our minds are illuminated may well fill us with amazement in contemplating this nature of ours."[1]

To proceed: *Tact*, the psychic analogue of touch, is a faculty of unconscious origin.

The *will* itself may be unconscious. "The conscious and unconscious wills are essentially distinguished by this, that the idea which forms the object of will is conscious in the one case, unconscious in the other."[2] Unconscious will.

"If it is desired further to distinguish the two kinds of will, for conscious will language already offers the term exactly covering the conception—free will; while the word 'will' must be retained for the general principle, which exists in us all—unconscious will."[3] "We may regard it as settled that the laboratory of volition is hidden in the unconscious. That we can only get to see the finished result, and that the glances we succeed in throwing into the laboratory never reveal

[1] Kant, section v., *Anthropologica*.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 253.
[3] *Ibid.*, vol. ii., p. 69.

those unconscious depths of the soul where occur the reaction of the will on motives and its passage into definite volition." [1]

The sense of the *beautiful* is of unconscious origin. "The creation of the beautiful by man proceeds from unconscious processes whose results the feeling and the discovery of the beautiful represent in consciousness, and form the starting-point of further conscious work which, however, at every stage needs more or less the support of the unconscious." [2] This sense of beauty is one of the most mysterious of our unconscious faculties. The more it is considered the more wonderful and arbitrary does it appear.

Genius and instinct.

The ordinary artist does everything with conscious choice, the *genius* acts on impulses from unconscious sources. There is a lack in the former of "divine frenzy, the powerful breath of the unconscious, which appears to consciousness as higher and inexplicable suggestions which it is forced to apprehend as facts, without ever being able to unravel their source".[3] "The difference between talent and genius is the difference between the conscious and the unconscious." [4]

Instinct is not the result of conscious reflection, not a consequence of bodily organisation, not mere results of the mechanical foundation of the organisation of the brain, but "the individual's own activity, springing from his inmost nature and character".[5]

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 263.
[2] *Ibid.*, p. 291.
[3] *Ibid.*, p. 278.
[4] E. Ribot, *Heredity*, p. 229.
[5] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 113.

The *ethical* element in man lies in the deepest night of the unconscious. "Consciousness may perhaps influence actions by presenting motives to react on the unconscious ethical, but whether this reaction follows, consciousness must calmly wait." [1] "Mystics in every country and age put faith only in their unconscious knowledge." [2]

"Our *ego*," or personality, as defined by Herbert Spencer, is "the permanent nexus, which is never itself in a state of consciousness, but which holds states of consciousness together." I think, however, we all feel, that though the conscious mind would fain arrogate the personality to itself, that personality holds a great deal more than mere "states of consciousness" together.

Our personality defined.

Indeed, as Spencer implies, the "ego" seems to have its origin or source in the unconscious region.

Professor Barrett (Dublin) says: "It is to the existence and vital faculty of this large area of our personality, which is submerged below the level of consciousness, that I wish to draw attention, for psychologists are agreed that its range must be extended to include something more than is covered by our normal self-consciousness. What we call 'ourself' is a something which lies in the background of our consciousness, enabling us to combine the series of impressions made upon us, or the states of feeling within us, into a continuous personal identity."

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 265.
[2] E. Ribot, *Heredity*, p. 229.

We are now prepared by the brief survey of mind from various sides, and in its various developments, to see that it everywhere tends to burst the confining wall of consciousness that has so long interposed as an iron barrier between it and the vast psychical region without, which we desire to see included under the one word, "mind". Let us then, in the first place, see what can be said *in favour of the limitation of "mind" to consciousness*, for to us the limitation is so transparently artificial that it is well to know it is still seriously and stoutly maintained.

Mind limited to consciousness.

Thus, "Mind is to be understood as the subject of the various internal phenomena of which we are conscious. Consciousness is to the mind what extension is to matter. We cannot conceive mind without consciousness, or a body without extension."[1]

Positivism defines mind as (1) the sum of consciousness at any instant in an individual; or as (2) the sum of the consciousness during the life of an individual, consciousness being not an attribute of mind, but mind itself. Again we get the extreme statements, "All and only the phenomena that are conscious are psychical".[2] "Wherever consciousness is impossible, mental action is impossible."[3] Professor Brentano declares there are no such things as unconscious psychical acts. Again, "psychical and conscious are for us, at least at the

[1] Sir W. Hamilton, *Lectures on Metaphysics*, ix.
[2] Prof. Ziehen, *Psychology*, p. 4.
[3] Prof. Calderwood, *Relation of Mind and Body*, p. 269.

beginning of our investigation, identical. The conception of unconscious psychical processes is for us an empty conception".[1] Here we find a little hedging, but what is curious, on the same page we get an illustration given of passing a friend unconsciously when absorbed in thought, coming to our consciousness after.[2] Professor Ziehen accounts for the unconscious impression by saying that more intense ideas absorbed the thoughts, and that only as these waned did the psychical perception of the friend appear, or he says the sight of a friend " may be accompanied by a sensation which, however, is not very intense in consequence of the predominance of other ideas ". This theory is partly negatived by the simple fact that these unconscious impressions do not rise to consciousness as other ideas lessen, but are flashed into consciousness often at long intervals afterwards; though, of course, an impression was made at the time unconsciously.

Again, " Though in a loose sense of the term consciousness some mental events may be said to be outside it, in another and stricter sense of the word all that is mental is at the same time an element of consciousness. Consciousness is the widest word in our vocabulary, and embraces everything that mind embraces."[3] This may be true as used by Mr. Mill, but if so, it embraces unconsciousness and becomes a word without meaning. Professor Alexander (Oxford) says: " Mind and consciousness are coextensive, though not

[1] Prof. Ziehen, *Psychology*, p. 5. [2] *Ibid.*
[3] James Mill, *Analysis of the Human Mind*, p. 227.

synonymous. I take mind to be convertible with consciousness." Aristotle, Mill, Hamilton, and Ward generally consider that consciousness is the cause and necessary form of mental states, and that mind cannot be conceived without it, and yet, as we shall see, more than one of these contradict this position in their own writings.

Leibnitz exposes this error.

"Reid, Stewart, Jouffroy consider consciousness is a faculty of mind. The school of Descartes and Locke, *i.e.*, the whole of the seventeenth and eighteenth centuries, expressly held that psychology has the same limit as consciousness, and ends with it. What is without consciousness is remanded to physiology, and between the two sciences the line of demarcation is absolute. Consequently all those penumbral phenomena which form the transition from clear consciousness to perfect unconsciousness were forgotten, and hence came superficial explanations and insufficient and incomplete views." But "the nature of things cannot be violated with impunity. Leibnitz alone in the seventeenth century saw the importance of this. Less was not to be expected of the inventor of the infinitesimal calculus. By his distinction between perception (conscious) and apperception (unconscious) he opened up a road in which in our time most physiologists and psychologists have somewhat tardily entered. There is no completed work on the subject. Such a work would need to show that most if not all the operations of the soul may be produced under a twofold form, that there are in us two

parallel modes of activity, the one conscious, and the other unconscious."[1]

Testimony for unconscious mind.

Turning now to *those in favour of unconscious psychical action*, we find that the fundamental importance for the conscious of the unconscious psychical life, the thorough dependence of the former on the latter, is, with Maudsley, a firm conviction. Amongst others he cites Hamilton, Carlyle and L. P. F. Richter in support of it. G. H. Lewes sees consciousness everywhere, even in the reflexes of the spinal cord, while Maudsley equally clearly, but to our mind with far greater reason, sees unconsciousness everywhere. He says: "It is a truth that cannot be too distinctly borne in mind that consciousness is not coextensive with mind; that it is not mind, but an incidental accompaniment of mind".[2] "The whole business of mental function as work might go on without consciousness, just as the machinery of a clock might work without a dial. It is a necessary concomitant, not an energy at work in the manufacture of the mental organism. The misfortune is that ordinary language assumes it to be a kind of superior energy."[3] Again, "Those who base psychology on the revelations of consciousness cannot but acknowledge that it is not essential to mental being at every moment, nor at any moment coextensive with the whole of it, but that mental powers exist habitually, and even act occasion-

[1] E. Ribot, *Heredity*, p. 221. [2] Maudsley, *Mind and Body*, p. 25.
[3] Maudsley in *Mind*, vol. xii., p. 503.

ally in the absence of consciousness".[1] A. Bain thinks that "Mind must be understood to cover the entire storage of mental impressions (even) when absolutely inactive and exercising no mental agency. The term consciousness refers purely to the moments of mental wakefulness or mental efficiency for definite ends."[2]

To affirm that the cerebrum may act upon impressions transmitted to it, and may elaborate intellectual results such as we might have attained by the intentional direction of our minds to the subject without any consciousness on our own part, is held by many metaphysicians, more especially in England, to be an altogether intolerable and even most objectionable doctrine. But this affirmation is only the physiological expression of a doctrine which has been current amongst metaphysicians in Germany from the time of Leibnitz to the present day, and which was systematically expounded by Sir Wm. Hamilton—that the mind may undergo modifications, sometimes of very considerable importance, without being itself conscious of the process until its results present themselves to the consciousness, in the new ideas or new combinations of ideas, which the process has evolved. This "Unconscious cerebration" or "Latent mental modification" is the process parallel in the higher sphere of cerebral or mental activity to the movement of our limbs, and to the direction of these movements through our visual sense which we put in train volitionally when

[1] Maudsley in *Mind*, vol. xii., p. 489.
[2] Prof. A. Bain in *Mind*, new series, vol. iii., p. 353.

we set out on some habitually repeated walk, but which then proceed not only automatically but unconsciously, so long as our attention continues to be uninterruptedly diverted from them.

In 1888 the Aristotelian Society held a special meeting to decide if "Mind is synonymous with Consciousness". It was decided in the negative. Professor Shadworth H. Hodgson, President of the Society, said: "It seems to me that both usage and accuracy of definition alike concur in deciding the question in the negative, for if we identify mind with consciousness, what are we to do with those states commonly called mental which are below the threshold of consciousness, and some kinds of which never rise above?" With this Dr. G. Ritchie (Oxford) and many others agreed. We consider this deliberate discussion and decision on this subject carries considerable weight, particularly when the arguments adduced are considered.

Mind is not synonymous with consciousness.

To proceed with our roll of witnesses.

Professor Beneke says: "In the developed soul there is a perpetual alternation of consciousness and unconsciousness. What has once been produced in the soul continues still to exist even when it has ceased to be excited. That which was conscious merely becomes unconscious or lives in the internal substance of the soul. This unconscious continuation of what has once existed in the soul is memory."[1] Sir W. Hamilton practically admits unconscious psychical action in his illustration of a chain

[1] Prof. Beneke, *Elementary Psychology*, p. 190.

of thought of which the first and last links alone are recognised, being like a row of billiard balls, which if struck at one end only the last one moves, the vibration being only transmitted through the rest. He gives an instance of suddenly, when on Ben Lomond, thinking of the Prussian system of education. These were the first and last links, the intermediate ones of which were recalled after, were that previously on the mountain he had met a German, and this German was a Prussian. He says: "Some hold that these hidden links rise into consciousness momentarily, but are forgotten".[1] But a few pages previously he says: "The whole we are conscious of is constructed out of what we are not conscious of".[2]

Evidence of Stout, Lazarus, White, Ferrier and Bastian.

"It is necessary to realise," quoting G. F. Stout, "clearly that psychical dispositions, out of consciousness, form an indispensable factor in mental processes throughout conscious life."[3] These psychological writers of advanced views all feel it necessary to state them as tentative and novel simply because the bulk, not alone of metaphysicians, but psychologists, have undoubtedly held that mind is consciousness. Some, using, as we have seen, a "wide" sense, have included under the term, states that may become conscious if sufficient attention is directed to them. But to talk of unconscious mind was distinctly held to be a contradiction in terms,

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 515. Sir W. Hamilton, *Lectures in Metaphysics*, vol. i., p. 354.
[2] Sir W. Hamilton, *Lectures in Metaphysics*, vol. i., p. 348.
[3] G. F. Stout, *Analytic Psychology*, 1896, p. 23.

and even the "unconscious cerebration" of the brain, which is now nearly universally acknowledged, was considered as late as 1876 a most objectionable doctrine.

Professor Lazarus says: "We have first of all to remember that our psychic life is made up of conscious and unconscious elements. We think of consciousness as a brightly illuminated space surrounded with widely extended darkness, with the dim elements, though outside consciousness, co-operating with those within in a state of co-vibration."[1] "That we can have thoughts and not be conscious of them, perform actions and not be conscious of them, are facts which prove that a theory of the mind which is limited to conscious states must be very imperfect, unless the meaning of the term conscious be so extended as to include unconscious states."[2]

The testimony of physiology is as follows: "The facts of physiology have at length led psychologists to see that states of consciousness form only a portion of the mental life, and have as background sub-consciousness and unconsciousness. At first it seems like a contradiction to speak of facts of unconsciousness as belonging to psychology, but when it is considered that the same changes in the nervous system may be accompanied by consciousness, or some sub-conscious change, it is evident that mind must consist of other elements than those which appear in consciousness. The study of physiology was necessary to bring out

[1] Prof. Lazarus in *Mind*, "Das Leben des Seele," vol. vii., p. 599.
[2] G. H. Lewes, *Problems of Life and Mind*, 3rd series, p. 144.

clearly the conception of unconscious feelings as facts in mental phenomena."[1] "The existence of unconscious processes in the region of thought or of action is indisputable, and forms by far the larger part of our psychical activity."[2]

Again, "The metaphysical view that mind and consciousness form an indivisible unity will not harmonise with the facts of physiology; for whole tracts may be cut out of the territory of intellectual consciousness without interfering with the integrity of unconsciousness, and well may be abolished while consciousness remains".[3]

Conscious and sub-conscious states are admitted by all writers. Unconscious states are proved to have an equal claim, because they not only take place in the same organ and under the same essential condition as in the conscious or sub-conscious states.[4]

Meaning of "mind" must be enlarged.

We will now sum up the evidence in the words of Bastian: "If we are, as so many philosophers tell us, to regard the sphere of mind as co-extensive with the sphere of consciousness, we shall find mind reduced to a mere imperfect disjointed series of agglomerations of feelings, and conscious states of various kinds—while a multitude of initial or intermediate nerve actions would have no claim to be included under this category. For these and other reasons we feel ourselves driven to the conclusion that the common notion as to what should be

[1] T. White in *Mind*, vol. vi., p. 506.
[2] G. H. Lewes, *Problems of Life and Mind*, prob. 11, p. 129.
[3] D. Ferrier, *Functions of Brain*.
[4] G. H. Lewes, *Problems of Life and Mind*, 3rd series, p. 157.

included under the term 'mind' is one which is altogether erroneous."[1] "If we are compelled to believe that consciousness is not co-extensive with the sphere of mind, in face of the now admitted fact concerning the frequent interpolation of unconscious nerve actions as integral parts of mental processes, only one course lies open to us. We must widen the signification of the term 'mind' itself."[1]

"This is no question of choice, but one of absolute necessity. The meaning of the word 'mind' must be considerably enlarged so as to include, . . . as mental phenomena, the functional results of all nerve actions . . . whether these nerve actions are accompanied by a recognised conscious phasis or no."[2] "Let us enlarge our conception and definition of mind. Let us openly profess that which has already been tacitly implied by many. Instead of supposing that mind and consciousness are co-extensive, let us make mind include all unconscious nerve actions. We must inevitably come to this, and the doctrine of 'unconscious cerebration' [Carpenter] has served to pave the way for it."[3]

Conclusion.

The case for the enlargement of the scope of mind has now been placed before our readers, the writer having sought all through to establish the various points by other voices than his own, and it

[1] C. Bastian, *Brain as an Organ of Mind*, p. 146.
[2] *Ibid.*, p. 148.
[3] C. Bastian in the *Journal of Mental Science*, vol. xv., p. 522. If any object to the term "nerve actions" as being a materialistic view of mind, it must be understood that the doctrine of "the unconscious mind," so far from relegating psychic phenomena to the physical, is the sole means of rescuing them from it.

is for our readers to judge whether throughout the history of mind from its earliest dawn, it is not everywhere inseparably connected with unconscious psychic actions; and finally whether when speaking of the mind that is in man it is not now high time definitely to include those unconscious mental powers that we trust we have proved to exist.

In short, the question raised here is this: "Are we to continue to limit the word 'mind' to that part made visible to us by consciousness and introspection; or is the word henceforth to include all the powers in us that we know and recognise by various means are 'mental,' whether they be seen or unseen?"

Consciousness is a very small part of the mind.

For it appears indeed to the writer that the conscious mind is a very small part of the whole psychic force within. A coral island in the South Pacific is a mere ring of rock in the water, of insignificant size, to the sailor; but to the biologist or geologist it is the highest peak of a stupendous structure that rises from the bottom of the ocean as a mountain miles high. Commencing as it does in the very smallest beginnings, it remains unrecognised until it rises above the surface of the sea. We only see the top of this structure and call it an island; indeed, it is all we are conscious of except by soundings or occasional glimpses of what is beneath, on calm days or at low tides. In the same way it appears to the author that of the sum of the psychic forces which we may call mental, and which constitute mind, only a very small portion are fitfully illuminated by what we call consciousness.

Some may think the point raised in this chapter has merely an academic interest. It is not so. Had it not the most far-reaching practical issues throughout life this work would never have been written. The establishment of the fact of an unconscious mind has a great bearing on the training of children; for children can be moulded unconsciously with far greater ease than through their consciousness. It gives also a great key to the cause and cure of many, if not of most, diseases. It lays bare at last the foundations of character, of conscience, of the entire "ego" so long obscured by a psychology bounded by the conscious.

CHAPTER III.

THE CONSCIOUS MIND.

The scope of mind must be enlarged.

In the chapter just concluded we have endeavoured to discuss impartially the questions as to whether, outside consciousness, processes are not carried on as purely "mental" as any within, and if such be the case, should not the word "mind" include all processes and actions that exhibit the qualities we recognise as "mental" or "psychical," whether they be conducted in consciousness or unconsciously, or partly the one and partly the other?

We found the first question answered in the affirmative, and, with regard to the second, we came to the conclusion, whether we carried our readers with us or no, that if the whole science of the study of mind, call it what you will, is to be rescued from the paralysing influence of a narrow shibboleth and placed upon rational grounds that accord with the results of modern research, the word "mind" must equally include *all psychical processes*, regardless whether the phenomenon of consciousness be present or absent; and the narrow shibboleth to which we have alluded (still muttered with reverence in some English and also foreign psychologies, though more often than not contradicted

in the same work), that consciousness is mind and mind is consciousness, be at last and for ever set aside.

In this present chapter we propose, with great brevity, to pass in review the leading ideas as to consciousness, before proceeding in our next to consider the whole question of unconscious mental action.

What is consciousness? Views of Ward, Lewes, Mahers, Locke.

Consciousness, then, is well spoken of as "perhaps the most protean of psychological terms".[1] Many writers indeed, as we have already seen, logically forced to acknowledge unconscious mental processes, though professing rigidly to adhere to their ancient belief of consciousness and mind being synonymous, make the word sufficiently protean or elastic to embrace unconsciousness itself; thus depriving it of all meaning.

"Whoever reflects," says Lewes, "on the numerous ambiguities and misapprehensions to which the term consciousness gives rise, will regret that the term cannot be banished altogether."[2]

Professor Mahers does not definitely use the word to mean unconsciousness, but declares it includes our whole psychical existence. He says: "In its widest sense, consciousness, as opposed to unconsciousness, denotes all modes of mental life. . . . It is, in fact, synonymous with the sum total of our psychical existence!"[3]

Consciousness means etymologically an accompany-

[1] Jas. Ward, *Mind*, vol. viii., p. 476.
[2] G. H. Lewes, *Problems of Life and Mind*, 3rd series, p. 143.
[3] Prof. Mahers, *Psychology*, p. 25.

ing knowledge. The scholastic definition was "*Perceptio qua mens de presenti, suo statu admonetus*"; one that wholly escapes the shibboleth into which so many moderns have fallen.

Again, "Consciousness is the perception (not the totality) of what passes in a man's own mind".[1]

Or, "Consciousness is a special faculty of mind" (Reid, Stewart, Burn, Hutcheson, etc.). Both of these escape the fatal definition "Consciousness *is* mind".

Plato, Aristotle, Leibnitz, Kant, Hamilton, Laycock, Davidson, Maudsley.

Plato, Aristotle, Locke, Leibnitz, Kant, and Hamilton in various ways regard consciousness as the *genus* of which our various faculties are the *species*, while Professor Laycock, in common with many others, says, "Consciousness is best described as a succession of states of existence; characterised by feelings, thoughts, volition and the like,"[2] a statement that seems to require a good deal of explanation to make intelligible. Indeed, the expression "states of existence," which is such a favourite in a certain school, is to ordinary minds confused and misleading.

Professor Davidson says of "states of consciousness": "A more unfortunate phrase was never coined. In the first place, consciousness has no states, being a perfectly simple never-changing act."[3] Again, "To make states of consciousness synonymous with states of mind, as some have heedlessly done, is scarcely less

[1] Locke, *Essay on Human Understanding*, vol. i., p. 220, sec. 19.
[2] T. Laycock, *Mind and Brain*, vol. i., p. 140.
[3] Prof. Davidson, *Mind*, vol. x., p. 127.

unwarrantable than it would be to assert all bodily acts to be conscious acts ".[1] " He who thinks to illuminate the whole range of mental action by the light of his own consciousness is not unlike one who should go about to illuminate the universe with a rushlight."[2]

Maudsley points out: " consciousness may be direct or transcendental "; and states that " empirical psychology is founded on the one, metaphysics upon the other ".[3] Consciousness, however, cannot be affirmed, or assumed, or predicated, it must be testified to by the individual.

Concerning consciousness, then, but two hypotheses are possible.

Two hypotheses.

1. That it is a common, though not indispensable, accompaniment of mental life; a secondary phenomenon, though of the highest importance.

2. That consciousness may be regarded as preeminently *the* one psychological fact, and as mind itself; and what we call the unconscious must be regarded, if psychical, as the minimum of consciousness.

To us the first is the true proposition agreeing with all modern research; while the second appears to sacrifice the very meaning of words in order to maintain an arbitrary definition that does violence to thought.

Psychological ingenuity has, however, discovered a further reason why the unconscious may be termed the conscious. Dr. Noble says: " Many call processes

[1] Maudsley, *Physiology of Mind*, p. 310.
[2] *Ibid.*, p. 44. [3] *Ibid.*, p. 15.

unconscious which are conscious but without *attention* or will". Again, "Attention is the common meaning of the word conscious when used in a loose and popular way".[1] "Consciousness is awakeness, attention is awareness."[2]

Consciousness is *not* unconsciousness.

The best answer to this is given in the words of Dr. Maudsley: "It may be said we are conscious of many things, but do not attend to them; to which I am tempted to reply, that it is the attention which is the consciousness; and that unconsciousness which is not consciousness because it does not attend, is not properly consciousness".[3] After all it may be that the "loose and popular meaning" given to "consciousness" is the more correct scientifically.

There can be no doubt, however, though we must definitely refuse to stretch the word "consciousness" so as actually to cover unconsciousness, that it does and must describe a very wide range of conditions differing in various ways.

In the first place, the *subject* of consciousness is never the same. Consciousness is in a state of constant change. There is no proof that an incoming current ever gives us just the same bodily sensation twice.

Consciousness varies as to subject.

"A permanently existing idea which makes its appearance at periodical intervals is as mythological an entity as the Jack of Spades."[4] "Mr. Sutton and

[1] Prof. Sully, *Pessimism*, p. 186. [2] W. L. Davidson.
[3] Maudsley, *Physiology of Mind*, p. 96.
[4] W. James, *Psychology*, p. 157.

Professor Huxley have made a step in advance in exploding the ridiculous theory of Hume and Berkeley that we can have no images (conscious) but of perfectly definite things. Feelings of tendency are often so vague we are unable to name them at all. What must be admitted is that the definite images of definite psychology form but the very smallest part of our minds as they actually live."[1]

Then as regards *intensity and degree* :—

As to intensity and degree.

"It admits of no doubt that consciousness is not a constant quantity, but that there are gradations of consciousness from its most vivid manifestations through stages of lessening sub-consciousness down to actual unconsciousness."[2] "Consciousness is not a constant quantity, but varies from the greatest intensity down to zero."[3]

"In some cases consciousness approaches a vanishing point, and often reaches and passes it. (!) If now we choose to call this state 'unconsciousness,' and reserve 'consciousness' only for clear consciousness, we should say that very many mental states exist below consciousness. The lower limit of consciousness does not admit of being definitely fixed."[4] For instance,

"In man we would not suppose general consciousness extinguishes all the lower ganglionic consciousness from which and by which it arose. We must expect in man a vast amount of survival submentally, which,

[1] W. James, *Psychology*, ix., p. 20.
[2] Maudsley, *Physiology of Mind*, p. 242.
[3] Maudsley, *Mind*, vol. xii., p. 491.
[4] Maudsley, *Physiology of Mind*, p. 240.

while not the mind *of* the man, is yet mind *in* the man. A cell or group of cells may be in pain, and yet there be no pain known to the general consciousness!"[1] We quote this not as endorsing its views, but on account of the felicitous distinction between the "mind of man" and the "mind in man".

Once more, "When I try to think, the ideas before my full consciousness seem to attract of their own accord the most appropriate of a number of other ideas lying close at hand. There seems to be an antechamber full of more or less allied ideas which are just beyond the full ken of consciousness. The thronging of the antechamber is, I am convinced, altogether beyond my control."[2] This of course refers to apperception, an unconscious process.

Degrees of consciousness.

Once more as to *degrees* of consciousness. Professor Baldwin gives a diagram illustrating the area of consciousness which passes from the outer circle of the unconscious (as the first degree) through the sub-conscious, passive consciousness, active consciousness or perception, up to apperception![3]

"Those nerve actions attended by consciousness (to which philosophers have been accustomed to restrict the words 'mind' and 'mental phenomena') constitute in reality only a very small fraction of the sum total of our nervous states or actions."[4]

"The ideas that have done much to make contem-

[1] Dr. H. M. Stanley (U.S.A), *Studies in Evolutionary Psychology*, p. 33.
[2] F. Galton, *Inquiry into Human Faculty*, p. 204.
[3] Prof. Baldwin, *Handbook of Psychology*, p. 68.
[4] C. Bastian, *Brain as an Organ of Mind*, p. 143.

porary psychology different from the psychology of the older empirical school are: The distinction that has been drawn between consciousness, sub-consciousness, and unconsciousness, as modes of sensibility differing only in degree, the older psychology having taken into account only those elements of mind that emerge into full consciousness."[1]

Consciousness is furnished with a threshold by Herbart; all below which is out of consciousness, and all above in. The real transition, however, is more gradual, it is rather like the eye; where the power of sight varies from the yellow spot of clear vision corresponding to clear consciousness, through the immediate surrounding retina of more or less imperfect visual impressions, corresponding to many so-called indefinite undiscriminated conscious experiences, down to the outer part of all, of whose visual impressions we are not aware, corresponding to unconsciousness. "The 'threshold' of consciousness may be compared to the surface of a lake, and sub-consciousness to the depths beneath it."[2]

But however degrees of consciousness may vary we must avoid, as we have already said, speaking with Leibnitz and Kant of imperceptible perceptions and unconscious representations.

Again, consciousness is not *permanent.*

"Our conscious content or mental presence emanates

[1] Prof. Whittaker, *Essays Philosophical and Psychological*, p. 46; also *Mind*, vol. vi., p. 503.

[2] Jas. Ward, article 1, "Psychology," *Encyclopædia Britannica*, 9th edition, vol. xx., p. 47.

from moment to moment as a new creation from unconscious depths of being. It is of the utmost importance to realise the speedy evanescence of conscious states." [1]

Consciousness not permanent.

"It were strange, were any inconsistency in human thought strange, how persistently we talk of the continuity of consciousness, when the truth is that a conscious state is not continuous, but transient." [2]

"Consciousness does not exist from the first in any soul, it must come into existence gradually." [3]

It is all very well for our opponents to say that the term "unconscious mind" is as meaningless as "wooden iron" (Ladd), etc. To avoid the expression by talking of unconscious consciousness is worse. "A flagrant violation of the first term of experience is the extension of states of consciousness beyond the testimony of consciousness, as if consciousness could be other than *conscious*." [4] On the other hand we must remember that the conscious often becomes the unconscious, and *vice versâ*.

"Consciousness," says Sully, "is a closely woven texture in which the eye fails to trace the several threads or strands. Moreover, there is the fact that many of these ingredients are exceedingly shadowy, belonging to that obscure region of sub-consciousness which it is so hard to penetrate with the light of discriminating attention." [5]

[1] Ed. Montgomery, *Mind*, vol. xiv., p. 498.
[2] *Ibid.*, p. 507.
[3] Beneke, *Elements of Psychology*, p. 185.
[4] Prof. Bascom, *Comparative Psychology*, p. 20.
[5] James Sully, *Mind*, vol. vi., p. 11.

"Unconscious powers possess the inherent capacity of becoming conscious; which capacity becomes actual as soon as they are excited by stimulants."[1]

"Notions existing in the soul can be excited into consciousness by external sense stimulants and by internal stimulants."[2]

We all know how we are at times conscious of organs (physical consciousness) of whose existence we are as a rule unconscious.

Value of consciousness.

As to the value of the part played by consciousness, it is interesting to observe how it is at times indeed a great help, but at others no less truly a hindrance.

In the first place, the value of reason and conscious choice over instinct and unconscious cerebration is undoubted; and the loss of value in actions and words the moment they become habitual and so sub-conscious (as in prayers, speeches, etc.) is well known. On the other hand—

First, "The traditional opinion current of the leading part played by consciousness in mental function has been an insuperable bar to true observation, and appreciation of what the nervous system can and does accomplish of itself without any help from consciousness".[3]

Secondly, "An active (self-)consciousness is always detrimental to the best and the most successful thought. The thinker who is actively attentive to the

[1] Beneke, *Elements of Psychology*, p. 21. [2] *Ibid.*, p. 29.
[3] Maudsley, *Mind*, vol. xii., p. 511.

succession of his ideas thinks to little purpose."[1] "The interference of consciousness is often an actual hindrance to the association of ideas."[2] We all know when ease has been acquired in any action by habit, how consciousness or will in its performance hinders rather than helps it.

The place of consciousness in the mind is well set forth by Sully.

"Conscious mind stands in relation to lower centres as the head of an office stands in relation to his subordinates. The mechanical routine of the office is carried on by them. He is called on to interfere only when some unusual action has to be carried out, and reflection and decision are needed. Moreover, just as the principal of an office is able to hand over work to his subordinates when it ceases to be unusual, and becomes methodised and reduced to rules, so the conscious mind is able to withdraw from acts thoroughly familiar."[3] A capital description of the formation of habit.

Consciousness not always reliable.

Thirdly, consciousness is not itself always a true and accurate witness of what takes place within its own sphere; because few are able to observe accurately; and in the very effort to observe a particular state of mind it is rendered unnatural, and this because of causes constantly at work to pervert feeling and vitiate reasoning. The results are therefore most contradictory amongst observers, and the veracity of consciousness cannot always be relied on.

[1] Maudsley, *Physiology of Mind*, p. 308. [2] *Ibid*, p. 307.
[3] Jas. Sully, *Handbook of Psychology*, 4th edition, p. 31.

Moreover, acts may be attributed to conscious volition erroneously.

"It is now very well known," says Myers, "that if a man in the hypnotic state be ordered to perform a certain act after he has been awakened, he will do it in the full belief that he is acting from his own choice and with complete freedom of will."[1]

To sum up, therefore, as far as we have gone, we find that the word "consciousness" is a word of most protean and doubtful meaning in the language of much current psychology; in which it is often used so as to be deprived of all sense. That it is a quality or state of mind and not mind itself, or even the greater part of mind. Consciousness is generally of the greatest value to us, though at times a positive hindrance. It varies indefinitely in intensity and degree, and is most evanescent. Even when accurately observed its testimony is often far from trustworthy.

Let us now consider for a moment its physical basis.

Physical basis of consciousness.

Laycock asks: "Is consciousness a cause or a result of changes in brain-tissue, and itself due to an immaterial cause?"[2]

In reply, "Consciousness accompanies the stream of innervation, being mainly of things *seen* if the stream is strongest occipitally, of things *heard* if it is strongest temporally, of things *felt* if the stream occupies most intensely the motor zone".[3] "There is no conscious

[1] F. W. H. Myers, *Proceedings of Psychical Research Society*, vol. vii., p. 302.
[2] T. Laycock, *Mind and Brain*, vol. i., chap. iv.
[3] W. James, *Psychology*, p. 118.

mental activity outside or beyond the cerebral function."[1]

"The consciousness of the moment may be conceived to be the complex product of an infinite multitude of simple and compound vibrations coming from the external and internal organs of the body."[2]

"Consciousness is a shadow of the corresponding nerve action. The amount of consciousness varies inversely with the antiquity of the action. Scenes, sights and sounds make less vivid impressions on consciousness by use and repetition."[3]

"All volitional initiative of (conscious) movement takes its start in the cortex."[4]

"The immediate condition of a state of consciousness is an activity of some sort in the cerebral hemisphere."[5]

We may remark here that consciousness is not, as far as we know, an inherent quality of the cortex or of the mind by itself, but appears to be the result of the interaction of the two; for when the activity of the cortex and hence the harmony of the two are disturbed, as by narcotics or a violent blow, it is lost.

On the other hand, "a glass of wine may do more to arouse ideas than the strongest effort of attention can do".[6]

Professor Huxley, with characteristic boldness in

[1] Maudsley, *Physiology of the Mind*, p. 374.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. xi., p. 73.
[3] See C. Mercier, in *Tuke's Dictionary of Psychology*, 1892, pp. 249, 254.
[4] Jas. Sully, *The Human Mind*, p. 49.
[5] W. James, *Psychology*, p. 5.
[6] Maudsley, *Physiology of Mind*, p. 30.

materialism, says: "I believe that we shall arrive at a mechanical equivalent of consciousness, just as we have arrived at a mechanical equivalent of heat".[1]

While Bain actually raises the question of the "cost of consciousness". "Does subjectivity (consciousness) cost anything physically? A pound of carbon can be converted into Co_2 in the dark without burning and a certain amount of heat produced. It can also be burned to give off light and heat. It would seem that the heat of the latter subtracted from the heat of the former method should give the amount of force spent in light; so we have nerve actions without subjectivity (consciousness), and other actions with subjectivity. In both classes there is an expenditure of force with physical results. The point would be to observe whether the physical results were not, in the case of subjectivity accompanying, the full equivalent of the forces expended."[2] Physical speculations.

The following from a well-known authority is perhaps more of an interesting scientific guess than a proved fact.

He states that "Consciousness is due not only to novelty, but to narrowness of the nerve channel, as electricity only produces light when the current is obstructed under high pressure and great friction. Intensity of consciousness is as the volume of nerve current. Hence vivid consciousness is found in youth (from novelty) and in great dangers (from volume).

[1] Huxley, *Macmillan's Magazine*, vol. xxii., p. 78.
[2] A. Bain, *Mind*, vol. viii., p. 405.

The oldest (racial) formations are in the medulla (unconscious) and under brain (sub-conscious), and are unconscious; newer ones are in the cortex, and are conscious."[1]

Consciousness not of material origin.

Against such speculations Professor Ed. Montgomery enters his emphatic protest. "The sight of a flame does not bring up from its extra conscious hiding-place the associated idea of heat through anything like mechanical contiguity or friction. Attempts to interpret the conscious content and its changes by applying statical or dynamical principles to its psychical facts and occurrences must ever remain a futile undertaking."[2]

That consciousness generally arises from sensations conveyed to the cortex is not, however, disputed. The following two points are of interest:—

"Consciousness is inseparable from feeling, but not, as it appears to me, from volition or thought. True, our actions and thoughts are usually conscious . . . but consciousness of an act is manifestly not the act, and although the assertion is less obvious, I believe that the consciousness of a thought is distinct from the thought."[3]

"Some observers suppose that tactile sensations travel unchanged from the skin to the cortex, and then suddenly blossom into sensations. We may ask what is the meaning of the constant relays of grey matter

[1] See C. Mercier, in *Tuke's Psychological Dictionary*, 1892, pp. 256, 257.
[2] Ed. Montgomery, *Mind*, vol. vii., p. 499.
[3] A. Bain, *Senses and Intellect*, p. 1.

along the sensory tract, unless it be that at each relay some transformation, some further elaboration of the impulses takes place, until what were relatively simple impulses along the afferent nerves, are, by successive steps, changed into the complex events which we call a conscious sensation?"[1]

Consciousness is not however only the result of sensation but of another faculty. "The essence and foundation of the faculty of consciousness is discrimination."[2] "In order that consciousness should occur *in its lowest stages* the several sensations should not only be experienced, but discriminated. As long as the sensations are confused together the soul remains in its elementary condition of unconsciousness."[3] Full consciousness, according to Bain and Spencer, is the result of two perceptions; the perception of a resemblance and the perception of a difference. Hobbes says: "It is almost all one for a man to be always sensible of one and the same thing, and not to be sensible at all of anything". Discrimination.

To reach full consciousness is often a practical difficulty and a real effort. Many, in listening to a conversation or reading, just use the minimum of consciousness necessary to follow what is said or written, and often not even this. To reach full consciousness when reading familiar words (say a chapter in the Bible), the words have to be forced into consciousness by an effort

[1] Sir Michael Foster, *Physiology*, 5th edition, p. 1106.
[2] Kirchener, *Psychology*, p. 73.
[3] Dr. Noah Porter, *Human Intellect*, p. 100.

of attention. The best way is to read the passage, pronouncing the words distinctly with the mouth; then to close the eyes and fix the mind on the words in the brain, till conscious that you have grasped their full meaning.

That consciousness is, as Spencer asserts, an alternation of two states may be illustrated in great grief. If there is only the one state of overwhelming sorrow, after a time it ceases to be felt so acutely, or to rise into full consciousness. But any change of surroundings, such as from going out or seeing fresh people, brings back the grief at once into full consciousness.

We will conclude this brief review of consciousness by considering its relation to the "ego".

Consciousness and the "ego".

"*Cogito, ergo sum*," according to Maudsley, means 'I (who am) think, therefore I (who think) am. This implies that consciousness is not the fundamental fact of being. There is the conscious 'I' and the unconscious 'I'. The conscious 'I' does not include the whole."[1] "The unconscious 'I' lies deep buried beneath all conscious manifestations. They are like waves on its surface, some of which reach deeper down than others, but none of which reach the lowest depths. Inevitably the axiom of Descartes (quoted above) assumes the fact of unconsciousness beneath consciousness, being the 'I' who am as the basis of the 'I' who think. Consciousness exists while fresh nerve tracts are being adapted for fresh mental combinations (habits); when these are perfected, consciousness lapses. The elements of mental

[1] Maudsley, *Mind*, vol. xii., p. 491.

action are capable of acting together before consciousness dawns (reflex action) and after it has set (acquired reflexes); consciousness plainly is not an essential part of the mechanism of the mind, but a something superadded."[1]

Sully and Bain point out that consciousness is not synonymous with self-consciousness.

From all this we see that our conscious self is not our entire self, any more than the visible or earth-turned face of the moon is the whole moon.

Secondary consciousness.

Not only our ego, however, can be split up into conscious and unconscious, but consciousness itself is by no means one and indivisible. Professor Binet (Sorbonne) says, in the conclusion of his *Alterations de la Personalité*, "that there may exist in the same individual a plurality of consciousness, and each of these consciousnesses is only aware of that which passes within its own special realm. Outside of our habitual consciousness there may exist within us conscious thoughts of which we know nothing." (!)

Professor Myers says: "I suggest that the stream of consciousness in which we habitually live is not the only consciousness which exists in connection with our organism. I hold it is perfectly possible that other thoughts, feelings, memories may now be actively conscious as we say 'within me' in some kind of co-ordination with my organism and forming some part of my total individuality."[2]

[1] Maudsley, *Mind*, vol. xii., p. 494.
[2] F. W. G. Myers, *Journal of Psychical Research Society*, vol. vii., p. 301.

"In certain persons the total possible consciousness may be split up into parts which co-exist, but mutually ignore each other."[1]

"The phenomena of hypnotism must often take place below the threshold of ordinary consciousness; possibly in one of those split-off selves or secondary states whose existence we have so often to recognise."[2]

Gurney, Binet and Janet have shown that many ignored elements of our characters are preserved, as they say, in split-off portions of the consciousness which can be tapped in certain ways.

We would rather account for such phenomena by saying these elements are dormant in the unconscious mind, but can be brought into consciousness by special means.

Max Desson, in *Das Doppel Ich*, speaking of semi-unconscious acts, says: "They must belong to a sub-consciousness which, in relation to the far more potent upper consciousness, can be best understood as a second consciousness".

In the above, as well as in other paragraphs we have quoted, there is much with which we do not wholly agree; but it is sufficiently obvious that the only solid ground amidst the quagmire of "may-bes" and other speculations, is to hold fast to the "loose and popular" meaning of consciousness, and to understand by the word that of which we as individuals are personally conscious, and not that of which our cells or organs may or may not be conscious; and above all, not that

[1] W. James, *Psychology*, p. 206. [2] *Ibid.*, vol. ii., p. 611.

(strange it should be necessary to press this) of which we are wholly unconscious.[1] Even when the scope of the word is thus safely limited, we know nothing of the cause of the phenomenon of consciousness. Fortunately, it is not necessary for us, in this monograph, to make any extended inquiry into the conscious, our subject being the unconscious; and we have therefore merely given a brief survey of current views on the leading facts connected with it, as a useful and necessary introduction to the subject of our next chapter.

[1] Prof. Calderwood asserts consciousness in sleep, *Relations of Mind and Body*, p. 19; Vict. Institute, April, 1898. See also chap. vii. for full quotation.

CHAPTER IV.

THE UNCONSCIOUS MIND.

BEFORE discussing in this chapter the existence and mode of action of the "unconscious mind" we will briefly pass in review a further collection of the strongest statements against it that we have been able to gather from the writings of psychologists and others. We have already done this at some length in chapter ii., and we merely give these in addition, as we desire in this work to state as fairly as may be both sides of the question, rather than present a merely one-sided statement excluding all contradictory evidence.

Testimonies against the unconscious mind.

It will be observed in the quotations we give that the writers are remarkable rather for vigour than for moderation of language; for dogmatic assertion and the arbitrary use of words (which is indeed the only method now left them) rather than for fair argument.

Professor Boune, of Boston, says: "Consciousness is the specific feature of all mental states. Unconscious knowing and willing are phrases which defy all interpretation. It is indeed possible that the soul may perform many unconscious functions, but they would have no mental claim."[1]

[1] Prof. Boune (Boston), *Introduction to Psychological Theory*, p. 237.

Our next quotations shall be from Professor Ladd's most recent work (1895). We will first give his unqualified denial of all unconscious mind, and then his assertion (in the same work) of its action. Elsewhere we shall give other quotations from this psychology in proof (given no doubt by that very unconscious mind Professor Ladd so vigorously denies in theory) of the existence of what in the following words he ridicules :—

Prof. Ladd is on both sides of the question.

"To speak of unconscious psychical or mental states as belonging to mind is to use words that are quite unintelligible. The attempt to form a metaphysical conception of mind which does not include consciousness as the one characteristic that distinguishes mind from not mind, must always remain a vain attempt."[1]

"To talk of unconscious mental states is to talk of the inconceivable—of 'wooden iron,' of the 'unconscious conscious' as it were."[2] No doubt this is so to Mr. Ladd's conscious mind, though not at all obvious to that of others.

"The term 'psychosis' is not to be employed for any sort of processes that are not processes in consciousness. The psychical is the conscious; and thus the psychical is distinguished from the physical, which we do not conceive of as conscious. . . . Consciousness, the one universal characteristic of all true mind states and real mental existences as far as known."[3] Could

[1] G. T. Ladd, *Philosophy of Mind*, p. 395.
[2] *Ibid.*, p. 385. [3] *Ibid.*, p. 384.

language be more emphatic, or the ancient shibboleth more rigidly adhered to?

But it would appear that even these phrases do not carry conviction to the unconscious judgment of their author; for to our astonishment he then writes as follows, speaking of unconscious mental action, such as instinct in animals, deeds of genius, and prodigies, etc. "There can be *no doubt* [*sic*] that all explanations which do not recognise the proof of mind (!) in such performances as these are quite unsatisfactory."[1] Professor Ladd thus appears almost equally emphatic upon both sides.

A well-known writer in *Mind*, Professor Ed. Montgomery, of California, adds his testimony. "Every one feels that to speak of unconscious mental states is not only to be uttering a paradox, but to be almost as preposterous as if we were to assert non-existent existence."[2]

So also is Prof. Sully.

We will now give a few quotations from Professor Sully's works, who affords another interesting example of how a man can unconsciously (or with his unconscious mind) contradict his conscious assertions.

"I hold that it is a contradiction to talk of any *mental* operation as altogether unconscious."[3] "Modern science, physiological as well as psychological, is unable to advance any proof of unconscious elements or

[1] G. T. Ladd, *Philosophy of Mind*, p. 381.
[2] Prof. Ed. Montgomery, *Mind*, vol. vii., p. 531.
[3] Prof. Sully, *Illusions*, p. 335.

processes in the human mind."[1] The sheer audacity of this statement is remarkable in such an able man.

"Every earnest psychologist must deeply regret the mischief wrought by this idea of unconscious mental processes in contemporary psychology."[2]

And yet in these same works from which we have quoted, Professor Sully, while vigorously combating the idea of unconscious mind, unconsciously admits it by his phraseology all through, *e.g.*, "The picture of memory has unknowingly to myself been filled by this unconscious process of shifting and rearrangement".[3]

The "unconscious process" here is clearly psychical. The curious part is that he forgets to put quotation marks to "unconscious mind" in most places; in some few where the contradiction of the phrase is obvious, he does.

Professor Royce, of California, writes as follows:—

"If by 'unconscious mind' is meant 'matter' we remain where we were. But if unconscious mind means aught else, then the term seems equivalent to 'unconscious consciousness'. For no idea of a reason or of a thought can be formed in such wise as to separate reason and thought from consciousness. Thought is a series of active conscious states; and all the ingenuity of generations of Von Hartmanns shall not induce us to corrupt our speculations with monstrous marriages of contradictory notions whereof the 'Philosophy of the

[1] Prof. Sully, *Pessimism*, p. 193. [2] *Ibid.*, p. 194.
[3] Prof. Sully, *Illusions*, p. 266.

Unconscious' seems so proud."[1] This is a fine Californian specimen of the vigorous dogmatic style.

Royce, Hutton, Ireland, and Kirchener.

There is a long article against the unconscious mind by R. H. Hutton in the *Contemporary Review*, in which, however, we fail to find one convincing sentence. To this it may be replied that we are probably not open to conviction. We will therefore give one or two of his strongest utterances.

"I do not think you can get the result of thinking without thought; of judging without judgment; of creative effort without the conscious adaptation of means to ends."[2] "I see nothing like latent or unthought thought, but only unthought physical conditions of thought."[3]

"Is it not fair to conclude, when we return to a subject after a time and find it taking much clearer shape in our minds, that the progress is probably due, not to unconscious cerebration, but to forgotten intervals of conscious intellectual work?"[4] The reader will say if he sees much force in these arguments.

Dr. Ireland says: "The theory of unconscious cerebration derives no support from physiology. It is a child of the old metaphysics to be brought forward and repelled by the study and analysis of mental operations cognisable by internal self-examination."[5]

Note specially that the main reasons why the uncon-

[1] Prof. Royce, *Mind*, vol. viii., p. 33.
[2] R. H. Hutton, *Contemporary Review*, July, 1874, p. 201.
[3] *Ibid.*, p. 203. [4] *Ibid.*, p. 211.
[5] Dr. Ireland, *Blot on the Brain*, and in the *Journal of Mental Science*.

scious mind is denied by all these writers is because they do not appear to recognise any method of investigation but introspection, a process necessarily conscious.

We conclude this adverse testimony with the following from Kirchener:—

"An unconscious consciousness! we understand by consciousness the self-perception which accompanies all psychic acts. The question therefore is, 'Are there unconscious psychic acts?' Many psychologists since Leibnitz have declared themselves in favour of an affirmative answer. Still the proof of unconscious psychical phenomena is difficult, for in order to be experienced they must be known. But their defenders assert that certain facts of experience compel us to accept unconscious states as their cause or as their effect. But what is adduced in proof fails in certainty. That a waiter was fast asleep in a noise and could not be awakened by a call or by his name but only by the word 'waiter,' proves nothing but that it was that which was so joined with his accustomed ideas and feelings as to be able to overcome his deep sleep. Certainly ideas and feelings call forth bodily movements unaccompanied by any direct experience of will. But these are processes which only belong to a part of the psychic life. As little is proved by the examples from which it has been desired to conclude that unconscious psychical acts are the effect of conscious ones."[1]

[1] Kirchener, *Psychology*, p. 61.

Unconscious phenomena are said to be physical.

Having thus given the *direct* negative sufficient hearing, we will furnish illustrations of some of the side winds by which the doctrine of the unconscious mind is sought to be blown away, and an *indirect* negative established, the chief one being to call its actions physical.

"Consciousness is the necessary condition of mind. Unconscious 'mental' states may be accounted for partly from the physical side, as excitation inadequate to a mental effort, and partly from the mental side, as a state of least consciousness."[1]

In short, it appears, we may suggest anything, or suppose anything, sooner than admit the heretical idea.

And yet the idea has an irresistible fascination for our opponents, as is so inimitably expressed by Ribot. "When the psychologist has resolved psychological phenomena into simple elements, he casts *a sly glance* also upon the mechanism that elaborates in the unconscious depths of soul the impulses derived from external impressions."[2]

Pursuing the physical theory, "Much of the *brain's* activity is below the domain of consciousness".[3]

"Hamilton and a large number with him partly obliterate the dividing line between matter and mind by insisting on sub-conscious states of mind."[4]

"The happy phrase is that of unconscious cerebration. Few are aware how much a doctrine is indebted

[1] Prof. Baldwin, *Handbook of Psychology*, p. 58.
[2] Prof. Ribot, *German Psychology*, p. 192.
[3] D. Ferrier, *Functions of the Brain*, p. 294.
[4] Prof. Bascom (Boston), *Comparative Psychology*, p. 22.

to a fortunate phrase and how misleading such phrases often are."[1]

Unconscious cerebration.

By this we understand that the phrase satisfies the professor by giving a physical origin to unconscious mind; but the fallacy of this is shown as follows:—

Laycock calls unconscious cerebral changes ideagenous (apt to beget ideas) and kinetic (productive of movement).

Dr. Ireland says: "To believe that unconscious cerebration is really due to unrecognised changes in the substance of the brain, and to hesitate to call them mental changes, is, as Sir Henry Holland has remarked, to suppose intellectual operations in which consciousness has no part, or an exclusion of mind from the highest function of mind. To call thought cerebration is not warranted by true philosophy. A man breathes, does not pulmonate."[2] He also observes that "A man can be conscious and not conscious of being conscious!"[3]

Dr. Ireland, it may be remarked, is really a strong opponent of unconscious cerebration. The last sentence, together with others we quote from other writers, is a clear illustration of the phrases which a man will use who, necessarily aware of the existence of the unconscious, refuses to recognise it as of mental quality.[4] It would be better for many of these writers to substitute for such statements the old couplet:—

[1] Prof. Bascom (Boston), *Comparative Psychology*, p. 23.
[2] Dr. Ireland, *Blot on the Brain*, pp. 216, 232. [3] *Ibid.*, p. 221.
[4] Dr. Ireland's phrase, however, refers to the actions of a fencer, and the use of "unconscious consciousness" here is rather more intelligible than in other writers.

I do not like thee, Dr. Fell,
The reason why I cannot tell.

For boldness perhaps the following is unsurpassed :—

"Matter and the unconscious are the same".[1] But this is rebuked by Lewes.

"When we are unconscious of a feeling it does not imply that it is a purely physical process."[2]

Again, "Are the processes of inferences which lie outside consciousness mental events at all? That there are cerebral processes involved is fairly certain, but that these are accompanied by anything mental is wholly gratuitous, and since it contradicts our radical psychical conception is to be rejected."[3]

Yes! that is the reason; the "radical psychical conception" must be preserved at all costs.

Unconsciousness partly admitted to be psychical.

"I am myself inclined to agree with Sir William Hamilton, and to admit his unconscious mental modifications, in the only shape in which I can attach any very distinct meaning to them, namely, unconscious modification of the nerves."[4]

How such could be "mental" Mr. Mill does not say, besides *all* "modifications of nerves" are unconscious.

"Having assumed to make out a science by dealing with states of consciousness we are aware that the latter are controlled more or less by sub-conscious, or

[1] Prof. Hering, *Über des Gedachtniss*, 1876.
[2] G. H. Lewes, *Problems of Life and Mind*.
[3] Prof. Sully, *Pessimism*, p. 190.
[4] John Stuart Mill, *Exam. of Sir W. Hamilton's Philosophy*, last edition, p. 285.

unconscious processes of precisely the same kind as those which work at conscious redintegration. The unconscious actions include dreams, sleep-talking, somnambulism, anæsthesia and hypnotism, and likewise the unconscious cerebration that takes place during these states. In all these states, as well as in normal consciousness, there are activities of the nervous system at work which are wholly outside of consciousness." [1]

"The pretension that there are unconscious ideas arises in this way: that in many purely mental acts physiological processes come into play. . . . In our opinion there is also no state of man which is not accompanied by some feeling of pleasure or pain. We are indeed accustomed to speak of this feeling when it attains to a certain degree. The healthy man has some consciousness of his organs (heart, stomach, head, etc.) when he does not notice them otherwise." [2]

J. S. Mill, G. Thompson, Kirchener, Carpenter, Hartmann, and Sully.

"Since consciousness has been almost uniformly taken as the basis of all strictly mental activity, it seems convenient to state as functions of the nervous system all those operations which lie below that level. The designation 'unconscious cerebration' is perhaps as unobjectionable as any other, and has been found readily intelligible." [3]

"It is comparatively unimportant whether the doctrine of 'unconscious cerebration,' or, in the language of

[1] Dr. G. Thompson, *System of Psychology*, p. 428.
[2] Kirchener, *Psychology*, p. 68.
[3] W. B. Carpenter, *Mental Physiology*, 4th edition, pp. 516, 517.

the German psychologists, the 'pre-conscious activity of the soul,' be expressed in terms of physiology or in terms of metaphysics, if the principle be duly recognised and the enormous practical importance of directing the pre-conscious activity through the physical nature be admitted and acted on, especially in the education of children."[1]

The well-known arguments used by Professor Huxley, in his *Lay Sermons*, for doubting the mental origin of many purposive actions, and based on Professor Goltz and Pflüger's experiments on frogs, are all founded on the assumption, "no consciousness, no mind". He shows that when the upper part of the brain (conscious centres) is destroyed, movements ordinarily accounted volitional are accomplished, such as swallowing, moving with light, etc., and because unconscious, concludes they are purely physical. All are, however, accounted for by unconscious mental action.

"The observation of the frog deprived of its brain shows that it can adapt its movements to the changed conditions in a way which, if consciousness and will were concerned, would manifestly presuppose a perfect knowledge of the position of the whole body."[2]

As a specimen of the assumption of purely physical connections between mental states, we give the following:—

"Far down, so to speak, below the surface of distinct

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, pp. 332, 333.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 235.

consciousness, in the intricate formation of ganglion cells and nerve fibres, the connections between the idea of self and this emotion of esteem have been slowly woven through long ages of animal development."[1]

"Connections between ideas and emotions being slowly woven," becoming, we presume, a physical part of the intricate formation, is one of those points in psychical physiology that are not yet proven.

Witnesses in support of the unconscious mind —Herbert Spencer, Whewell, Kant, Clifford.

Let us turn now to the affirmative side of the question. We have in an earlier chapter brought full and forcible evidence in favour of the unconscious mind which need not be repeated; we will, however, give briefly as additional evidence the further testimony of Leibnitz, Helmholtz, Laycock, Schelling, Sir W. Hamilton, Hack Tuke, Herbart, Sir John Herschell, O. W. Holmes, Galton, Sully, Lewes, C. Bastian, Maudsley, Ribot, Whittaker, Bascom, F. W. G. Myers, G. Thompson and James Ward; the evidence of many others, such as Von Hartmann, Carpenter, Kant, Carlyle, L. P. F. Richter, A. Bain, Shadworth Hodgson, C. Ritchie, Beneke, G. F. Stout, Bowen, Lazarus, T. White, Barrett, Reid, Stewart, Jouffroy, Ferrier, etc., is given elsewhere. It addition to these the principle is tacitly admitted by Herbert Spencer (*Principles of Psychology*, vol. i.) in his accounting for our acceptance of general axioms, and our connecting successive perceptions of space and time by instinctive mental rela-

[1] Sully, *Illusions*, p. 321.

tions. Kant says this is by "pure intuition," Whewell by "instinctive induction". Professor Clifford agrees with Herbert Spencer.[1] All these expressions imply unconscious mental action and those who use them clearly unconsciously admit it.

It will be observed that the names of psychologists, metaphysicians, philosophers and other trained observers are all given promiscuously, as the doctrine is too broad and the results of its application too vast and momentous to be settled by the dogmatism of any one school of thought. Nationally, the doctrine of unconscious acts of mind is generally refused in France and Britain, the position being "no modification of mind devoid of consciousness," though, as we have seen, this position is unconsciously constantly contradicted. In Germany, on the contrary, the doctrine is almost universally accepted, no philosopher of note rejecting it. We proceed to give brief extracts.

Leibnitz, Helmholtz, Galton, Lewes, Hamilton, Tuke, Herschell, Holmes, Laycock.

"The insensible perceptions are as important in pneumatology as corpuscles are in physics." "These unconscious acts of mind, called obscure ideas, insensible perceptions."[2]

Helmholtz speaks of "unconscious inferences" in reference to optical illusions.

Schelling says with approval, "Leibnitz, in *Als denkbar*, was the first to assert the existence of unconscious perceptions as ideas".[3]

[1] See W. K. Clifford in the *Contemporary Review*, Oct., 1874, pp. 712-717.
[2] See Leibnitz, *Nouveaux Essais*, vol. ii., chap. i.
[3] G. Schelling, pp. 108-115.

"Perhaps the strongest of the impressions left by these experiments (on mind action) is the valid reason they afford for believing in the existence of still deeper strata of mental operations sunk wholly below the level of consciousness."[1]

"The vast multiplicity of mental operations that are in simultaneous operation of which only a minute part falls within the ken of consciousness."[2]

"The experiments (in introspection) gave me an interesting view of the obscure depths of the mind of which I had been but little conscious before."[3]

"There are numberless indications of a mental activity only recognisable as a neural process, not at all as a conscious process."[4]

"We class the changes in the sensorium under three heads of varying relative intensity, and call them conscious, sub-conscious and unconscious states. The two first are admitted by all writers. The last are proved to have an equal claim; for the unconscious processes not only take place in the same organs as the others, but are shown to have the cardinal character of sentient states by their influence in determining ideas and actions."[5]

"The fact of unconscious intellectual processes no less than that of unconscious sensual and volitional processes carries two important consequences. First, it disproves the notion that psychology can be limited

[1] F. Galton, *Inquiry into the Human Faculty*, p. 202.
[2] *Ibid.*, p. 333. [3] *Ibid.*, p. 186.
[4] G. H. Lewes, *Problems of Life and Mind*, prob. i., p. 20.
[5] *Ibid.*, prob. xi., p. 157.

to the facts of consciousness; for this would exclude the greater part of our mental life; it would imply that a judgment or a train of reasoning was not a psychological fact when it passed unconsciously. Second, it proves that psychology cannot be divorced from physiology without excluding all the processes known to be physiological and known to be unconscious." [1]

"We are constrained to admit as modifications of mind what are not in themselves phenomena of consciousness." [2]

Sir Wm. Hamilton further asserts (lect. xviii.) that the mind exerts energies and is the subject of modifications, of neither of which is it conscious.

"'Unconscious cerebration'—that activity of intellectual and mental modification which goes on without the consciousness of the subject." [3]

"No general fact is so well established by the experience of mankind or so universally accepted as a guide in the affairs of life as that of unconscious mental life and action." [4]

"Below the threshold of consciousness," says Herbart, "all perceptions belong to the unseen perceptions of Leibnitz."

"In such cases we have evidence of a thought or intelligence working within our organism distinct from that of our personality" [5] (*i.e.*, unconsciously).

"It is a great source of error to believe that there is

[1] G. H. Lewes, *Problems of Life and Mind*, prob. i., p. 19.
[2] Sir W. Hamilton, *Lectures on Metaphysics*, vol. i., p. 348.
[3] Hack Tuke, *Dict. of Psychological Medicine*, ed. 1892, vol. xi., pp. 133, 136.
[4] Dr. T. Laycock, *Mind and Brain*, vol. i., p. 161.
[5] Sir John Herschell, *Lectures on Scientific Subjects*, p. 412.

no perception in the mind but that of which it is conscious. The doctrine under the name of latent consciousness, obscure perceptions, the hidden soul, unconscious cerebration, reflex action of the brain, has of late years emerged into general recognition in treatises on psychology and physiology!"[1]

Sully, who is generally an opponent, expresses no doubt that there "are a number of mental processes of which we are unconscious".

Lewes says approvingly: "Kant admits that unconscious sensations and obscure perceptions form the larger proportion of our mental states".[2]

"Unconscious mental modifications do undoubtedly exist; that is, real mental actions, which, though they do not reveal themselves in consciousness, seem to be in all other respects precisely similar to those which do so manifest themselves."[3]

Bastian, Maudsley, Ribot, Whittaker, Ward, Bascom, Myers, Thompson.

"The pre-conscious activity of mind, and the unconscious activity of mind which may perhaps now be deemed to be established, are surely facts of which the most ardent introspective psychologist must admit that self-consciousness can give us no account."[4]

"The psychical study of unconscious phenomena dates from scarcely half a century back, and is yet in its first stage."[5]

"The facts of physiology have led psychologists to

[1] Prof. O. W. Holmes, *Mechanism in Thought*, p. 38.
[2] G. H. Lewes, *Study of Psychology*, p. 17.
[3] C. Bastian on "Consciousness," *Journal of Mental Science*, vol. xv., p. 519.
[4] Maudsley, *Physiology of Mind*, p. 20.
[5] Ribot, *Heredity*, p. 220.

see that the series of states of consciousness . . . only forms a portion of the mental life; that definite consciousness has a background of sub-consciousness and unconsciousness. At first it seems like a contradiction to speak of facts of unconsciousness as belonging to psychology. The study of physiology was necessary to bring out clearly the conception of unconscious feelings as factors in mental phenomena."[1]

"Many of the ideas connected with the general concept of unconsciousness have acquired new importance lately. . . . Psychologists no longer believe that all the factors of mental phenomena can be discovered by mental introspection. Recent theories of the origin of the perception of space, that of Lotze, for example, depend on the admission that there are unconscious elements in perception derived from the muscular and organic sense."[2]

"The processes that go on outside of consciousness are not in their intellectual bearings very unlike those that go on in it."[3]

"The hypothesis of 'unconscious mental modifications,' as it has been unfortunately termed, the hypothesis of '*sub*-consciousness,' avoids this contradiction. The hypothesis of sub-consciousness has been strangely misunderstood, and it would be hard to say at whose hands it has suffered most—those of its exponents or its opponents. Half the difficulties are due to the ambiguity of the word 'consciousness'."[4]

[1] Prof. Whittaker, *Essays on Psychology*, p. 48. [2] *Ibid.*, p. 49.
[3] Prof. Bascom (Boston), *Comparative Psychology*, p. 38.
[4] Jas. Ward on "Consciousness," *Encyclopædia Britannica*, 9th edition, vol. xx., p. 47.

F. W. G. Myers recognises, besides "sub" and unconscious, supra-conscious operations. His theory of unconsciousness, which he calls sub-liminal consciousness, is best given in his own words.

"I suggest that each of us has an abiding psychological activity far more extensive than he knows. All is, I hold, conscious; all is included in an active or potential memory below the rest of our habitual consciousness. For all which lies below this threshold, 'sub-liminal' seems the fittest word. Unconscious or sub-conscious would be directly misleading. I hold that the spectrum of consciousness, if I may so call it, is, in the sub-liminal self, indefinitely extended at both ends. At the inferior or physical end (*sub*) it includes much that is too rudimentary to be retained in the ordinary consciousness of an organism so advanced as man's. As to the superior or psychical end (*supra*), it includes an unknown category of impressions which ordinary consciousness is incapable of receiving save as messages from the sub-liminal consciousness. Varying our metaphor, the range of sensation covered by our ordinary consciousness resembles the range of temperature in an ordinary thermometer. The range is but a small segment of the temperature — the Cosmos." [1]

Dr. Thompson admits the fact but not the "science" of it.

"That there is an unconscious mind, therefore, we are forced to assume at the very threshold of mental

[1] F. W. G. Myers, *Journal of Psychical Research Society*, vol. vii., p. 306.

science. But we can have no science of unconscious mind, and we can only think of it in terms of consciousness."[1]

Fortunately, in view of this last sentence, this is not a strictly scientific work, but we would point out to Dr. Thompson and others that, in ignoring unconsciousness in mind, and proclaiming its very existence impossible as so many do; and in saying that, even if it did exist, there is no possibility of demonstrating it, as Dr. Thompson does; they all rest upon a fallacy we have already exposed, namely, that the only method of investigating mind is by conscious introspection — a method obviously inapplicable to most unconscious phenomena, though, as we shall see, not to all; totally ignoring the many other channels of observation open to us, besides the results of indirect methods of deduction and inference.

Practical value of unconscious mind to psychologists.

We will proceed to give one or two illustrations of the action of the unconscious mind, and for this purpose will quote the very same Dr. Thompson whom we have just criticised; for nothing is stronger proof of the existence of unconscious mind than to note how readily nearly every strong opponent of unconscious psychism (if we may coin the word) himself gives evidence in its favour.

"I have had a feeling of the uselessness of all voluntary effort, and also that the matter was working itself clear in my mind. It has many times seemed to me

[1] Dr. G. Thompson, *System of Psychology*.

that I was really a passive instrument in the hands of a person not myself. In view of having to wait for the result of these unconscious [!] processes, I have proved the habit of getting together material in advance, and leaving the mass to digest itself till I am ready to write about it. I delayed for a month those portions of this work relating to attention, association, and representation. I went to my library each morning and persevered days in succession reading Aristotle, Locke, Hartley, Mill, Bain, Spencer, Lewes, Paine, Hodgson, and then would sit looking out of the window at the park. I was conscious of thinking of nothing. I would take my field-glasses and watch people. I wanted to write, but could not, because I was conscious I was not yet in a proper mental state to say what ought to be said. One evening when reading the daily paper, the substance of what I have written flashed upon my brain, and next morning I began to write. This is only a sample of many such experiences."[1]

"In writing this work I have been unable to arrange my knowledge of a subject for days and weeks until I experienced a 'clearing up' of my mind, when I took my pen and unhesitatingly wrote the result. I have best accomplished this by leading the (conscious) mind as far away as possible from psychology."[2]

I think our readers will agree that a more valuable testimony to unconscious mental action could hardly be given, nor one more common in the experience of literary men. The most curious part of it is that the

[1] Dr. G. Thompson, *System of Psychology*, p. 432. [2] *Ibid.*

very psychology that states that there can be no science of unconscious mind, is itself largely written confessedly by its agency.

Its value in the spiritual life.

When the conscious mind is in abeyance as in a dream or reverie, or artificially as in hypnotism or narcotism, the unconscious mind emerges from its obscurity, and impressions unconsciously formed upon the brain are seen and noticed for the first time; just as a receding tide lays bare the sands. In defective intellects when the conscious mind is weak, the power of the sub-conscious is remarkably seen. Miss Martineau tells us of an idiot who had his hands washed and his nails cut at 11·10 A.M., and who came of his own accord exactly at the same hour each day to have the operation repeated, though he knew nothing consciously of time.

In all spiritual and religious exercises, whether anciently among monks and other ascetics, or in the present day, the greatest results are obtained as consciousness is wholly or partly in abeyance.

Professor Barrett says: "The 'mysteriousness of our being' is not confined to subtle physiological processes which we have in common with all animal life. There are higher and more capacious powers wrapped up in our human personality than are expressed even by what we know of consciousness, will or reason. There are supernormal and transcendental powers of which, at present, we only catch occasional glimpses; and behind and beyond the supernormal there are fathomless abysses, the 'Divine ground' of the soul, the 'ultimate

reality of which our consciousness is but the reflection or faint representation'. Into such lofty themes I do not propose to enter, they must be for ever beyond the scope of human inquiry; nor is it possible within the limits of this paper to give any adequate conception of those mysterious regions of our complex personality, which are open to, and beginning to be disclosed by, scientific investigation."

In religious services for the "deepening of the spiritual life" it is to be noted how prominent a place is given to the "cessation of effort," to the "casting out of self," to "lying passive," and "yielding up our powers," etc. The larger and more potent part of our spiritual, as of our physical life, is behind the veil of our normal consciousness, and beyond our highest intellectual capacity. Kingsley says: "It leads to the mistaking conscious emotions for the workings of the Spirit, which must be above consciousness".[1] A well-known Christian teacher, the Rev. Dr. Andrew Murray, writes: "Deeper down than where the soul with its consciousness can enter, there is spirit matter linking man with God; and deeper down than the mind and feelings or will—in the unseen depths of the hidden life—there dwells the Spirit of God".

Recognised by teachers.

Our conscious mind, as compared with the unconscious mind, has been likened to the visible spectrum of the sun's rays, as compared to the invisible part which stretches indefinitely on either side. We know now that the chief part of

Supra- and sub-consciousness.

[1] *Life of Charles Kingsley*, vol. i., p. 102.

heat comes from the ultra-red rays that show no light; and the main part of the chemical changes in the vegetable world are the results of the ultra-violet rays at the other end of the spectrum, which are equally invisible to the eye, and are only recognised by their potent effects. Indeed, as these invisible rays extend indefinitely on both sides of the visible spectrum, so we may say that the mind includes not only the visible or conscious part, and what we have termed the sub-conscious, that lies below or at the red end, but the supra-conscious mind that lies beyond at the other end —all those regions of higher soul and spirit life, of which we are only at times vaguely conscious, but which always exist, and link us on to eternal verities, on the one side, as surely as the sub-conscious mind links us to the body on the other.

Activities and organisms.

The mind, indeed, reaches all the way, and while on one hand it is inspired by the Almighty, on the other it energises the body, all whose purposive life it originates. We may call the supra-conscious mind the sphere of the spirit life, the sub-conscious the sphere of the body life, and the conscious mind the middle region where both meet.

The Spirit of God is said to dwell in believers, and yet, as we have seen, His presence is not the subject of direct consciousness. We would include, therefore, in the supra-conscious, all such spiritual ideas, together with conscience—the voice of God, as Max Müller calls it—which is surely a half-conscious faculty. Moreover, the supra-conscious, like the sub-conscious, is, as

we have said, best apprehended when the conscious mind is not active. Visions, meditations, prayers and even dreams have been undoubtedly occasions of spiritual revelations. 1 Cor. ii. 3-5 ; 2 Cor. iv. 7, 16 ; 2 Cor. xii. 2, may be adduced as instances of the working of the Spirit apart from the action of reason or mind.

The truth apparently is that the mind as a whole is in an unconscious state, but that its middle registers, excluding the highest spiritual and lowest physical manifestations, are fitfully illuminated in varying degree by consciousness ; and that it is to this illuminated part of the dial that the word "mind," which rightly appertains to the whole, has been limited. A writer in *Mind* supports the idea of supra-consciousness when he says : "There are operations in us which transcend the limitations of ordinary faculties of cognition and which yet remain, not below the threshold, but rather above the horizon of our consciousness".[1]

Let us continue.

"The automatic flow of thought is often singularly favoured by the fact of listening to a weak continuous discourse (sermon?) with just enough ideas in it to keep the (conscious) mind busy. The induced current of thought is often rapid and brilliant in inverse ratio to the force of the inducing current."[2]

Further testimony of its value.

The writer, in common no doubt with many of his readers, must confess experience of the above, which

[1] See *Mind*, vol. xii., p. 271.
[2] O. W. Holmes, *Pages from Odd Volumes*, p. 292.

has often been his consolation when compelled to sit out vapid discourses. The idea of an "induced current" is most felicitous.

G. H. Lewes points out that the "same physiological effects accompany the conscious and unconscious state. Every sense of impulse, whether discriminated or not, effects circulation and develops heat."

Dr. H. Munsterberg's interesting experiment on apperception shows work performed unconsciously which has all the character of work which, before the formation of habit, consciousness can alone effect; and also the practically constant time in which intelligent acts of varying complexity are performed unconsciously contrasted with the varying time they require if performed consciously. The whole is well worth reading.[1]

"The brain not only receives impressions unconsciously, registers impressions without the co-operation of consciousness, elaborates material unconsciously, calls latent powers into activity without consciousness, but it responds also as an organ of organic life to the internal stimuli which it receives unconsciously from the body." [2]

"The so-called pre-conscious soul of which some philosophers have written is truly the pre-conscious mental life of the race." [3]

It does indeed seem probable that unconscious knowledge is never acquired save as result of habit and volition, in oneself or one's ancestry.

[1] See *Mind*, vol. xv., p. 240. [2] Maudsley, *Physiology of Mind*, p. 35.
[3] *Ibid.*, p. 366.

"Many educated persons know four languages. This will give 160,000 words, or 40,000 for each, which is an underestimate. These words are as arbitrary symbols as signs in algebra. Then consider the countless facts and ideas bound up with these words in a well-informed mind. Such a mind is far more richly stocked with words and ideas than the British Museum is with books. The British Museum will produce, after a hunt in catalogues and shelves of perhaps ten minutes, any book wanted. But the single unconscious librarian who waits our orders in the crowded chambers of our memory is far more speedy and skilful in his service. A student reads a page of French or German in a minute, and for each of the 200 or 300 groups of hieroglyphics printed on it, the unconscious instantly furnishes us with whatever we call for; its meaning, its etymology, its English equivalent, or any associated ideas connected with it. We have no conscious clue to direct the search. It is enough we want the point to be remembered, and instantly it is produced out of the vast repository. I think this single illustration sufficient proof of the presence and agency of the unconscious. For what mechanical or chemical action is conceivable as a possible explanation of the phenomenon in question?"[1]

Wonders of the memory.

With this interesting illustration we conclude this chapter.

[1] Prof. Bowen, *Modern Philosophy*, p. 457.

CHAPTER V.

THE RELATIONS OF THE UNCONSCIOUS AND THE CONSCIOUS.

In this chapter we will give a few facts relating to degrees of unconsciousness, to the manner in which the unconscious becomes revealed consciously, to the way in which conscious sensation and action and thought are based on the unconscious mind, and, lastly, further evidence as to the importance of the latter.

Degrees of unconsciousness.

As to degrees of unconsciousness.

"There are three degrees of latency of consciousness.

"1. The infinitely greater part of our spiritual (mind) treasures (ordinary knowledge) lie always beyond the sphere of consciousness.

"2. Extraordinary knowledge of which we are wholly unconscious in ordinary states is brought to light in sickness, fever, madness, fits, etc.

"3. Mental activities of which we are unconscious, but which manifest their existence by effects of which we are conscious."[1]

"Mental changes, of whose results we subsequently

[1] Sir W. Hamilton, *Lectures on Metaphysics and Logic*, vol. i., p. 34.

become conscious, may go on below the plane of consciousness."[1]

"I do not overlook the fact that some writers suppose these unconscious states not to be entirely unconscious. But if this were granted it would not matter much. It would only prove that the mind may do the work with a consciousness so slight as to be almost *nil*. A consciousness which has sunk to such a degree of sub-consciousness as to be practically unconscious cannot be of much moment."[2]

"Hamilton's definition of mind is defective. By defining mind to be the subject of the various internal phenomena of which we are conscious, he leaves all the mental phenomena of which we are not conscious and the existence of which he admits (*supra*) without any subject; he does not deal with that substratum of mentality which is beneath mentation or conscious mental function, and which is in the cerebral organisation. Cerebral mental function may be conscious or unconscious, active, sub-active, or in abeyance; and it is only when the intricate organism of thoughts, desires, etc., reaches a certain height of energy that these functions become conscious—that they in fact function as consciousness."[3]

Sir William Hamilton says further referring to the third degree of unconsciousness of which we have spoken:—

[1] Maudsley, *Physiology of Mind*, p. 26.
[2] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 516.
[3] Maudsley, *Physiology of Mind*.

"Are there not in ordinary mental modifications (*i.e.*, mental activities and passivities) of which we are unconscious, but which manifest their existence by effects of which we are conscious? I do not hesitate to affirm that what we are conscious of is constructed out of what we are not conscious of. Thus those mental modifications are not in themselves revealed to consciousness, and we are thus constrained to admit as modifications of mind what are not phenomena of consciousness."[1]

"Consciousness arises midway between ancestrally organic unconscious nerve movements, and experimentally organic unconscious nerve movements. The difference between unconscious and conscious nerve action is not one of quality but of quantity and interaction. All vertebrata normally have consciousness."[2]

Conscious results of unconscious mind.

We now proceed to give evidence in the way in which the unconscious mind reveals itself in consciousness.

Cardinal Newman shows that assent may die down to inference, or rise to assertion by intangible reasons and processes; or, in other words, unconscious mental operations alter our beliefs.

"An assent sometimes dies out without tangible reasons sufficient to account for its failure."[3]

"We are often mastered by a feeling which has already struck firm roots in our inmost being without

[1] Sir W. Hamilton, *Lectures on Metaphysics and Logic*, vol. i., p. 348.
[2] Dr. G. Thompson, *System of Psychology*, p. 295.
[3] Cardinal Newman, *Grammar of Assent*, p. 160.

our suspecting it; and suddenly there falls, as it were, scales from our eyes. One has only to remember how often the souls of pure girls are completely possessed by a first love which they would with a good conscience deny; but should the unconsciously loved one incur a danger, then she knows at that same moment that she loves and how she loves."[1]

Pflüger, in the *Teleological Mechanism of Life*, says: "As a matter of fact, many processes go on in the central nervous system which, while either unknown to the *ego*, or at any rate performed without foresight and calculation, have yet, as their direct and necessary result, conscious perception and volition, which the wisest reflection could not make more effective for their ends".

Wundt on the unconscious.

"The notion of the unconscious has been recognised by Perty, who finds himself drawn on to a derivation of instinct from unconscious movements. And likewise Wundt, who admits 'the necessity of referring the origin of sensuous perceptions and of consciousness in general to unconscious logical processes, since the processes of perception are of an unconscious nature, and only their results are wont to appear in consciousness. The suggestion of the logical character of the processes of perception possesses the essential requirements of a very well-grounded theory. That would be at once the simplest and most appropriate expression under which the facts of observation can be *combined*. The first act of appre-

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 259.

hension which yet belongs to a sphere of unconscious life is already a process of inference; it is proved that there is not merely a conscious but also an unconscious thinking. We believe that we have hereby completely proved that the assumption of unconscious logical processes is not merely competent to explain the results of the processes of perception, but that it, in fact, also correctly declares the real nature of these processes, although the processes themselves are not accessible to immediate observation.

"'The unconscious logical processes are carried on with a certainty and regularity which would be impossible where there exists the possibility of error. Our mind is so happily designed that it prepares for us the most important foundations of cognition, whilst we have not the slightest apprehension of the *modus operandi*. This unconscious soul, like a benevolent stranger, works and makes provision for our benefit, pouring only the mature fruits into our laps.'"[1]

Illustrations of unconscious mind actions.

We now give a series of interesting extracts from an anonymous writer in *Macmillan's Magazine*. Perhaps some of our readers may recognise the pen.

"Influence (conscious) is entirely the result of unconscious knowledge." "Intimations reach our consciousness from unconsciousness, that the mind is ready to work, is fresh, is full of ideas." "Thinking aloud, humming a tune is nearly always unconscious in

[1] See Wundt, *Beitrage zur theorie der Sinnes Vermehrung*, p. 169, 375, 436, 488, quoted by Ed. v. Hartmann, *Philosophy of the Unconscious*, p. 39.

the first instance." "After being raised to a higher rank (baronetcy or peerage) the whole behaviour subtly and unconsciously changes in accordance with it."[1]

(This is also the case in a minor degree with different styles and qualities of dress and varying environments. Quite unconsciously we change our behaviour, carriage and style to suit the circumstance.)

"The grounds of our judgment are often knowledge so remote from consciousness that we cannot bring them into view." "That the human mind includes an unconscious part; that unconscious events occurring in that part are proximate causes of consciousness; that the greater part of human intuitional action is an effect of an unconscious cause; the truth of these propositions is so deducible from ordinary mental events and is so near the surface that the failure of deduction to forestall induction in the discerning of it may well excite wonder."

"Our behaviour is influenced by unconscious assumptions respecting our own social and intellectual rank, and that of the one we are addressing. In company we unconsciously assume a bearing based on unconscious data quite different from the home circle." (See *supra*.) "Unconscious assumption continually gives rise to misconception and cross purposes." "The truth of a geometric theorem flashes on consciousness from a train of unconscious connections."[2]

To return to known psychologists.

[1] Anon., "Studies in Psychology," *Macmillan's Magazine*, 1882.
[2] *Ibid.*

Illustrations from Jessen, Rosmini, Porter, Holman, Ward, Montgomery, Bascom.

"When we reflect on anything with the whole force of the mind, we may fall into a state of entire unconsciousness in which we not only forget the outer world but also know nothing at all of ourselves and the thoughts passing within us after a time. We then suddenly awake as from a dream, and usually at the same moment the result of our meditations appears clearly and distinctly in consciousness without our knowing how we reached it."[1]

A friend of Dr. Carpenter stated that when the solution of a problem he had long vainly dealt with flashed across his mind, he trembled as if in the presence of another being who had communicated a secret to him.

"A close attention to our internal operations, along with induction, gives us this result, that we even exercise ratiocination of which we have no consciousness, and generally it furnishes us with this marvellous law, that every operation whatsoever of our minds is unknown to itself until a second operation reveals it to us."[2]

"That the soul may act without being conscious of what it does and that these unconscious acts affect those acts of which it is conscious has been already established."[3]

We may give the following interesting example of the practical value of this:—

[1] Jessen, *Psychology*, quoted by Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 235.
[2] Rosmini, *Psycologia*, vol. i., p. 196.
[3] Noah Porter, *Human Intellect*, p. 103.

"All percepts are practical judgments, and are . . . intuitive judgments. . . . The mental processes involved constitute what is called practical reason. Its most striking form is seen in those inventions which are so often made by artisans. There is no explicit thinking out of matters by, say, a bricklayer; but a kind of almost instinctive realising that such materials will lead to given practical results. The individual himself regards the whole matter as one of doing and not of thinking."[1]

"The unconscious motive power in all actions is to seek pleasure and avoid pain."[2]

"Hence the mental process must be wholly dependent for its origin to subsistence on an actuating substratum of unconscious force."[3]

"It is inexplicable how premises which lie below consciousness can sustain conclusions in consciousness; how the mind can wittingly take up a mental movement at an advanced stage, having missed its primary steps. . . . We shall, therefore, in oversight of all this accumulated rubbish of sub-conscious phenomena, proceed," etc.[4]

This is a truly remarkable sentence. Certain important phenomena occur and are not denied, but, because inexplicable, are to be entirely overlooked as "accumulated rubbish". Greater philosophers speak differently.

[1] See Prof. Holman, *Introduction to Education*, pp. 299, 300.
[2] Jas. Ward, *Encyclopædia Britannica*, article "Consciousness".
[3] Ed. Montgomery, *Mind*, vol. vii., p. 212.
[4] Prof. Bascom (Boston), *Comparative Psychology*, pp. 31-33.

Illustrations from Lewes, Ribot, Sully, Maudsley, Holmes, and Child.

"Sir William Hamilton has mentioned the case of a row of billiard balls (already quoted). When one is struck the impetus is transmitted through all the row, but only the last ball moves, the others remaining in their places."

"'Something like this,' he says, 'seems often to occur in a train of thought, one idea immediately suggests another into consciousness—this suggestion passing through one or more ideas which do not themselves rise into consciousness.' This point, that we are not conscious of the formation of groups, but only of a formed group, may throw light on the existence of unconscious judgments, unconscious reasonings, and unconscious registrations of experience."[1]

"Character is the only immediate cause of voluntary action. Motives are mediate causes, but the latter are conscious, or liable to become so; the former is absolutely unconscious."[2]

"To recognise a man by gestures, etc., though popularly called a perception, is much more of an 'unfolded process of conscious inference'."[3]

We quote this last sentence as another ingenious synonym for unconsciousness.

Unconscious bases of conscious acts and feelings.

We will now illustrate the way in which conscious sensations, actions and thoughts are based on the unconscious mind. Let us first of all consider the discomfort we experience when an unconscious thought is struggling to rise into consciousness.

[1] G. H. Lewes, *Problems of Life and Mind*, problem xi., p. 161.
[2] Ribot, *German Psychology*, p. 245.
[3] J. Sully, *Illusions*, p. 26.

"It is surprising how uncomfortable a person may be made by the obscure idea of something which he ought to have said or done, and which he cannot for the life of him remember. There is an effort of the lost idea to get into consciousness, which is relieved directly the idea bursts into consciousness." [1]

"There are thoughts that never emerge into consciousness, which yet make their influence felt among the perceptive mental currents just as the unseen planets sway the movements of the known ones." [2]

"I was told of a business man in Boston who had given up thinking of an important question as too much for him. But he continued so uneasy in his brain he feared he was threatened with palsy. After some hours the natural solution of the question came to him, worked out, as he believed, in that troubled interval." [3]

Personal illustrations.

Last year the writer was driving to Phillimore Gardens to give some letters to a friend. On the way a vague uneasiness sprang up, and a voice seemed to say, "I doubt if you have those letters". Conscious reason rebuked it and said, "Of course you have; you took them out of the drawer specially". The vague feeling was not satisfied, but could not reply. On arrival, he found the letters were in none of his pockets. On returning, they were found on the hall table, where they had been placed a moment while putting on his gloves.

The other day the writer had to go to see a patient

[1] Maudsley, *Physiology of Mind*, p. 290.
[2] Prof. O. W. Holmes, *Pages from Odd Volumes*, p. 282. [3] *Ibid.*, p. 280.

in Folkestone, in Shakespeare Terrace. He got there very late, and did not stay but drove down to the Pavilion for the night, it being dark and rainy. Next morning at eleven he walked up to find the house, knowing the general direction, though never having walked there before. He went up the main road, and, after passing a certain turning, began to feel a vague uneasiness coming into consciousness, that he had passed the terrace. On asking the way, he found it was so; and the turning was where the uneasiness began. The night before was pitch dark and very wet, and anything seen from a close carriage was quite unconsciously impressed on his mind.

Unique evidence of unconscious mind action.

We now reach a very valuable and unique body of testimony to the action of the unconscious mind.

The following questions were asked from a body of 200 American university students and professional persons, 151 being men, and forty-nine being women. The answers are recorded and given by Professor Child.

"21. When you cannot recall a name you want, does it seem to come back spontaneously without being suggested by any perceived association of ideas?" To this, 11 per cent. answered "No," and 81 per cent. answered "Yes".

"22. Does such recovery ever come during sleep?" To this, 17 per cent. answered "No," and 60 per cent. "Yes".

Examples given: "1. This morning I tried to recall

the name of a character I had read of the night before in one of Scott's novels, and failed. I taught a class, and, walking home in the afternoon, all the names recurred to me without effort. 2. I tried to recall the name of a book. Gave it up. Half an hour after, while talking of something else, blurted it out without any conscious volition."

"23. Have you ever had some new discovery or invention flashed into consciousness as a clear conception?" 32 per cent. have had the conception, and of these 71 per cent. had it flashed into consciousness suddenly.

"24. On seeing a sight for the first time, have you ever felt that you had seen (or heard) the name before?" 59 per cent. answered "Yes".

"25. When perplexed at mathematical problems or other puzzles, have you left it, turned your attention elsewhere, and, after some time, found you could master it easily?" To this 77 per cent. said "Yes," and 12 per cent. "No". One gave this illustration :—

"In writing music, I search in vain for a bass or chord. I go for a walk, and on return can write it without effort."[1]

In general terms the women showed less experience with unconscious cerebration than the men. There appears to be a decrease with increasing age in the conscious results of unconscious mind action. From twenty-five to thirty there is a constant interruption of this power.

[1] Prof. Child (America), *American Journal of Psychology*, vol. v., part ii.

We now quote the following from Kirchener:—

"Our consciousness can only grasp one quite clear idea at once. All other ideas are for the time somewhat obscure. They are really existing, but only potentially for consciousness, *i.e.*, they hover, as it were, on our horizon, or beneath the threshold of consciousness. The fact that former ideas suddenly return to consciousness is simply explained by the fact that they have continued psychic existence; and attention is sometimes voluntarily or involuntarily turned away from the present, and the reappearance of former ideas is thus made possible." [1]

Source of feelings.

The more thoroughly we examine the mechanism of thought, the more clear is it that not only automatic but unconscious action enters largely into all its processes. O. W. Holmes says: "Our different ideas are stepping-stones; how we get from one to another we do not know; something carries us. We (our conscious selves) do not take the step. The creating and informing spirit, which is *within* us and not *of* us, is recognised everywhere in real life. It comes to us as a voice that will be heard; it tells us what we must believe; it frames our sentences and we wonder at this visitor who chooses our brain as his dwelling-place." [2]

Galton says: "I have desired to show how whole states of mental operation that have lapsed out of ordinary consciousness admit of being dragged into light". [3]

[1] Prof. Kirchener, *Psychology*, p. 205.
[2] O. W. Holmes, *Mechanism in Thought and Morals*, p. 39.
[3] F. Galton, *Inquiry into the Human Faculty*, p. 202.

Professor Montgomery observes: "We are constantly aware that feelings emerge unsolicited by any previous mental state, directly from the dark womb of unconsciousness".

"Indeed, all our most vivid feelings are thus mystically derived. Suddenly a new irrelevant, unwilled, unlooked-for presence intrudes itself into consciousness. Some inscrutable power causes it to rise and enter the mental presence as a sensorial constituent. If this vivid dependence on unconscious forces has to be conjectured with regard to the most vivid mental occurrences, how much more must such a sustaining foundation be postulated for those faint revivals of previous sensations that so largely assist in making up our complex mental presence!"[1]

"It has often happened to me," says Sir Benjamin Brodie, "to have accumulated a store of facts, but to have been able to proceed no further. Then, after an interval of time, I have found the obscurity and confusion to have cleared away; the facts to have settled in their right places, though I have not been sensible of having made any effort for that purpose."[2]

Wundt on the value of the unconscious.

"The traditional opinion that consciousness is the entire field of the internal life cannot be accepted. In consciousness, psychic acts are very distinct from one another . . . and observation itself necessarily conducts to unity in psychology. But the agent of this unity is outside of

[1] Ed. Montgomery, *Mind*, vol. vii., p. 212.
[2] Sir B. C. Brodie, *Psychological Inquiries*, 2nd edition, p. 20.

consciousness, which knows only the result of the work done in the unknown laboratory beneath it. Suddenly a new thought springs into being. Ultimate analysis of psychic processes shows that the unconscious is the theatre of the most important mental phenomena. The conscious is always conditional upon the unconscious."[1]

Before passing on, we must call special attention to this profoundly true and important utterance. Wundt here states the real position and importance of the unconscious mind with great force and weight.

Again, Hartmann says:—

"What Schopenhauer calls 'unconscious rumination' regularly happens to me when I have read a work which presents new points of view essentially opposed to my previous opinions. . . . After days, weeks, or months we find, to our great astonishment, that the old opinions we had held up to that moment have been entirely rearranged, and that new ones have already become lodged there. This unconscious mental process of digestion and assimilation I have several times experienced in my own case."[2]

Dr. Creighton remarks: "Our conscious life is the sum of these entrances and exits. Behind the scenes, as we infer, there lies a vast reserve which we call 'the unconscious,' finding a name for it by the simple device of prefixing

Dependence of the conscious on the unconscious.

[1] Wundt, *Physiological Psychology*, Introduction, p. 5, quoted by Ribot in *German Psychology of To-day*, p. 191.

[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, p. 321.

the negative particle. . . . The basis of all that lies behind the scene is the mere negative of consciousness." [1]

Again, "The process of reasoning adds nothing to knowledge (in the reasoner). It only displays what was there before, and brings to conscious possession what before was unconscious." [2]

"Mind can do its work without knowing it. Consciousness is the light that lightens the process, not the agent that accomplishes it." [3]

"This unconscious life is constantly springing up to sustain the conscious life." [4]

"It is through the sub-conscious self that Shakespeare must have perceived, without effort, great truths which are hidden from the conscious mind of the student; that Phidias fashioned marble and bronze; that Raphael painted Madonnas, and Beethoven composed symphonies." [5]

"The mind receives from experience certain data, and elaborates them unconsciously by laws peculiar to itself, and the result merges into consciousness." [6]

Here is an instance:—

"Sir W. R. Hamilton discovered quaternions on 15th October, 1843. On that day he was walking from his observatory at Dublin, with Lady Hamilton, when, on reaching the bridge, he 'felt the galvanic circle of thought close,' and the sparks that fell from it were

[1] C. Creighton, *Unconscious Memory*, p. 7.
[2] Maudsley, *Physiology of Mind*, p. 13.
[3] Maudsley, *Mind*, vol. xv., p. 171.
[4] Prof. Bascom (Boston), *Comparative Psychology*, p. 246.
[5] L. Waldstein, *The Sub-conscious Self*, p. 23.
[6] Ribot, *German Psychology*, p. 237.

the fundamental relations between i, j, k, just as he used them ever afterwards." [1]

"When the unaccustomed causes surprise we do not perceive the thing and then feel the surprise; but surprise comes first, and then we search out its cause; so that the theory must have acted on the unconscious mind to create the feeling, before being perceived in consciousness." [2]

Interdependence and mystery of the two.

We think the remarkable series of extracts we have given clearly show the dependence of the conscious upon the unconscious, and that all the bonds of union that connect states of consciousness lie in the unconscious world. And what mysteries lie hidden there in each of us. How we find sudden trouble reveals, even to ourselves, depths of affection we never knew we were capable of. Our standard of ethics, our very character (which changes continually), our varying moods, all proceed from hidden forces in the unconscious mind.

With the growth of experimental psychology we are beginning to discover the complex nature of our personality, and how that part of our ego which is below the threshold of consciousness, may be led to emerge from its obscurity. But as the bright light of the day quenches the feeble light of the stars, so the vivid streams of consciousness in our waking life must be withdrawn or enfeebled, before the dim record of unheeded past impressions becomes apparent.

[1] Prof. O. W. Holmes, *Pages from Odd Volumes*, p. 281.
[2] Cardinal Newman, *Grammar of Assent*, p. 160.

We will close this chapter with a few more proofs of the importance of the unconscious.

Further evidence of the value of the unconscious.

"Of what transcendent importance is the fact that the unconscious part of the mind bears to the conscious part such a relation as the magic lantern bears to the luminous disc which it projects; that the greater part of the intentional action, the whole practical life of the vast majority of men, is an effect of events as remote from consciousness as the motions of the planets."[1]

"The education that is given in civilised countries all the world over differs little in its essential parts; the conscious self is therefore substantially the *same* wherever schools and colleges exist. The sub-conscious self, however, which is built up out of that countless multitude of sub-conscious impressions from the surroundings, customs, language, and so many other sources, is widely *different*. An 'educated' Frenchman's opinion may be in no wise different from that of an educated Englishman or German. But when for any reason, as through illness, his conscious self fails him, his sub-conscious asserts itself, and the national characteristics appear."[2]

Here is an example of unconscious powers given by Dr. Carpenter:—

"Zerah Colborn could instantaneously tell the square root of 106,929 as 327 and the cube root of 68,336,125 as 645. Before the question of the number of minutes

[1] Anon., "A Study in Psychology," *Macmillan's Magazine*, 1882.
[2] Dr. L. Waldstein, *The Sub-conscious Self*, p. 16.

in forty-eight years could be written, he said 25,228,810. He immediately gave the factors of 247,483 as 941 and 263, which are the *only* two; and asked then for those of 36,083, answered none, it is a prime number. He could not tell *how* the answer came into his mind. He could not, on paper, do simple multiplication or division."

Testimony from an opponent.

We now give a most remarkable and valuable passage from Ladd's most recent work (1875), who, as we have seen, is a vigorous supporter of the old and narrow school. Here he is again forced, this time openly and deliberately, to admit that much that is of most value in consciousness is derived from what he calls "hidden depths below," and further on, attributes it to "somewhat or some One (with a capital O) of whose doings we are not conscious". It may be well to stick to one's text, but the shifts one is put to at times in doing so are painful; and in this case, we think most will agree, it would have been better to give it up, or boldly broaden it to admit the unconscious, rather than attribute natural mental processes to material ("somewhat") or supernatural ("some One") agencies.

"A thinker on any problem finds the truth shot up from the hidden depths below; it appears presented for seizure to consciousness as the gift of the Unconscious [*sic*]. In similar fashion are the happy hits of inventors, the rare achievements of art, . . . *bestowed upon* the mind rather than consciously wrought out by it. Nor can one fail to notice as significant, the connection of

all such experiences with the conditions and nature of 'tact,' of 'instinct'. If, then, credit is to be given, as it were, to the unconscious activities of our own mind for these results in consciousness which follow states of unconsciousness, such credit must be extended quite indefinitely. For the credit of much of our most brilliant and impressive acts in consciousness undoubtedly belongs not to consciousness; it belongs to *somewhat* or to *some One* of whose doings we, as conscious egos, are not immediately conscious."[1]

Range of the unconscious is indefinite.

We may add to our remark that it is quite true that the range of the unconscious mind must necessarily remain indefinite; none can say how high or how low it may reach. This is, however, a very insufficient reason for denying its existence, save for those who will own nothing they cannot weigh and measure in some way or other. As to how far the unconscious powers of life that, as has been said, can make eggs and feathers out of Indian corn, and milk and beef and mutton out of grass, to say nothing of directing those protective organisms recently revealed by Metchnikoff and others, are to be considered within or beyond the lowest limit of unconscious mind, we do not therefore here press. It is enough in the present work to establish the fact of its existence; to point out its more important features; and to show that in all respects it is as worthy of being called mind, as that which works in consciousness. We therefore return to our first definition

[1] G. T. Ladd, *Philosophy of Mind*, 1895, p. 393.

of mind as "the sum of psychic action in us, whether conscious or unconscious".

Evidence continued.

To resume. The powers of the unconscious mind are seen in a remarkable way in insanity. The sane man is one in whom the conscious mind—the middle part of the spectrum—rules. In an unsound mind the supra- or sub-conscious steps in, and overpowering the conscious mind, produces ecstatic vision and phantasms, or coarse and sensual conduct. It is remarkable to note in this connection, when reason is even partially dethroned, how the whole unconscious mind can unite in coupling the highest spiritual ideas with the lowest sensuality, as in some recent heresies.

We conclude with the following from Maudsley:—

"It is the unconscious element inborn in the nature of the individual that constitutes the basis of character and conduct".[1]

"It has been previously said that mental processes do not necessarily imply consciousness; it may now be affirmed that the most important part of mental action, the essential process on which thinking depends, is unconscious mental activity."[2]

Moreover,

"The unconscious does not fall ill, the unconscious does not grow weary, but all conscious mental activity becomes fatigued".[3] This is partly why involuntary muscles driven unconsciously do not get fatigued as the voluntary muscles soon do.

[1] Maudsley, *Physiology of Mind*, p. 435. [2] *Ibid.*, p. 34.
[3] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. xi., p. 47.

"To what has been said of unconscious mental functions, this more may now be added, that the deep basis of all mental functions lies in the organic life of the brain, the character of which is that in health it proceeds without consciousness."[1]

Summary of evidence given so far.

It may be worth while here, as a postscript to this short chapter, just to see how far we have got in the establishment of the presence and powers of the unconscious mind in man.

Nearly all the work of establishing the latter yet lies before us. The action in detail of the unconscious mind in habits, in education and mental training, in all the various powers and parts of the body, in sickness and health, and in many other ways, all are as yet untouched; still a foundation has been laid.

We have established, we trust on credible and creditable authority, in the first place, the fact of the *existence* of the Unconscious Mind, and established its right to be so called. With regard to its powers, the following is a brief summary, in the words of the writers, of some of the testimony already given. We have produced evidence from known psychologists that the unconscious mind is the secret source of apperception (Bowen), the fundamental source of all mental operation (Rosmini), the unconscious motive power in all actions (Jas. Ward), the basis of all mind action (Montgomery), the immediate cause of all voluntary action (Ribot), the vast reserve behind the scenes (C. Creighton), the *agent* that accomplishes all mental work (consciousness being

[1] Maudsley, *Physiology of Mind*, p. 41.

merely the light) (Maudsley); the uniting agent in all separate acts of consciousness (Wundt), the basis on which the conscious always depends (Wundt), the ceaseless spring of conscious activity (Bascom), the elaborator and arranger of all data and facts (Ribot, etc.), the source of happy hits, of rare achievements, of inventions, of our most brilliant and impressive acts (Ladd), the source of genius, instinct, tact, love of the beautiful, invention, ethics (Von Hartmann), the basis of all character and conduct (Maudsley), the most important part of mental action, the essential process on which thinking depends (Maudsley), the deep basis of all mental functions (Maudsley), and (may we add in conclusion?) the seat of inspiration, of conscience, and of the Divine life (Barrett, Murray, etc.).

Surely then a part of our being that is the seat and repository of such vast powers is worthy of more consideration than it has ever yet received at the hands of any psychologist; and we are convinced that once these relinquish their narrow prejudices, and seriously take up the study of this great subject in a worthy manner, a new era will have dawned for their science; it will have been placed on a broad and impregnable basis, and rescued from the opprobrium and contempt that at present it excites in so many quarters.

If this poor monograph by an unscientific pen, by any weight that may lie in its quotations, rather than by its arguments, helps in any way towards this great end, it will more than have fulfilled its purpose.

CHAPTER VI.

THE UNCONSCIOUS MIND AND HABIT.

BEFORE entering directly on the subject of this chapter it will be necessary to clear the ground a little first by giving a succinct outline of the various classes of actions, and their conscious or unconscious origin. Classification of actions.

It will be remembered that in our first chapter we divided the brain into three regions, consisting respectively from below upwards of the medulla or lower brain, the basal ganglia or mid brain, and the cortex or upper brain; the last of which has long been proved to be the sole sphere of conscious and voluntary action.

Different classes of actions are associated with each of these three brain regions. As we are regarding them now from the standpoint of consciousness we will class them entirely with reference to this.

The medulla or lower brain, therefore, is the seat *par excellence* of what are known as natural reflex (or automatic) actions—actions performed wholly unconsciously, and not only without conscious will, but beyond the power of our wills to control. (*See diagram.*) Medulla and natural reflexes.

We are not, therefore, in any way consciously responsible for these actions, so removed from our authority.

On investigation it will be found that most of these automatic reflexes concern the essential physical life of the body, such as the regulation of respiration, of circulation and the beating of the heart, of digestion, both in its chemical and physical processes.

Reflexes are not reflected.

We must carefully observe here that although we call these actions reflex no physiologist for a moment supposes that the nerve current (afferent or sensory) is *reflected* and becomes the nerve current acting (efferent and motor); on the contrary, the transition from the reception of the message to the despatch of the answer is undoubtedly an extremely complicated process, and one which, as we shall see when we come to speak of the relation of the unconscious mind and the body, generally involves psychic action. Hartmann says: "The most certain proof of the inner psychical side of the reflex process is the teleological character of this reaction, which is expressed in the thorough-going purposiveness of the physiological reflexes".[1]

This being the case, it is a very significant commentary on the relative powers of the conscious and unconscious minds that all those processes on which the actual maintenance of our life depends are placed under the control of the latter, the former being allowed no voice whatever.

In many of these reflexes, however, we are conscious of the effect produced—as in palpitation of the heart, acceleration of the circulation, etc.; while in a

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 232.

few others we can observe both the cause and effect, though without power over the unconscious action, as in laughing when tickled, or in blushing when ashamed.

One or two, such as respiration, can also be conducted voluntarily, and up to a certain extent the conscious will is allowed to interfere with the unconscious automatic reflex, but only up to a certain limit. Beyond this, at a point where further interference would be prejudicial to life, the unconscious asserts its superiority; for no voluntary effort can enable a man to hold his breath beyond a certain point.

Such then is the nature of actions performed by the different centres in the medulla or lower brain.

Mid brain and acquired reflexes or habits.

The functions of the basal ganglia in mid brain and of the cortex or upper brain are not so clearly distinguished from each other. There are two very distinct classes of actions that correspond very fairly to these two higher divisions, namely, voluntary conscious actions, the seat of which is undoubtedly the cortex or surfaces of the two great hemispheres of the brain, and those which form the subject of this chapter—habits, instincts, and all complicated purposive actions, walking, speaking, etc.—actions connected rather with the purposes of life than its existence, as are those in the medulla.

These were once voluntary.

Most of these actions, in man at any rate, were at one time conducted within the sphere of clear consciousness, and were voluntary in every detail.

Repetition, however, by degrees lessened the volun-

tary and the conscious element, until at last the very same actions were performed with greater accuracy absolutely involuntarily, or unconsciously; therein resembling in character the natural reflexes of the medulla. They differ from them, however, in the fact that they can at any time be brought into consciousness, and that the conscious will can entirely inhibit these actions, which is never the case with those natural reflexes that are in the medulla. Habits, therefore, may be called acquired or artificial reflex actions.

Another difference between natural and acquired reflexes, already quoted in chapter iii. from Maudsley, is that natural reflexes are outside consciousness because it has not yet *risen*, while acquired reflexes are out of consciousness because it has *set*. All acquired unconscious reflexes were once conscious actions (in man at any rate), which natural reflexes never were.

The seat of acquired reflexes.

Now as to the seat of these, which obviously must be to a large extent the sphere at any rate of the *action* of the unconscious mind, it is clear that it is not in the medulla, just as it is clear that voluntary actions require a healthy cortex for their display. Disease in man and experiments in animals, too long to be detailed here, have demonstrated this much. For instance, when the cortex is removed, voluntary action is abolished though the animal can fly, or walk, or balance itself, and utter its usual sounds, not voluntarily, but on being irritated. Further, when the mid brain is removed and the medulla only left, all these powers are lost, and the

animal continues the bare process of life, together with the simplest reflex movements with the limbs.

Of course all this points to the mid brain as the seat of artificial or acquired reflex actions; and such it probably is, only we must notice that although the cortex is the only seat of voluntary and conscious action, there is no direct proof of which I am aware that shows that it cannot be the seat of unconscious actions as well. We can only say therefore that, while voluntary actions are carried on by means of the upper brain, and natural reflexes by the lower, habits, etc., are probably carried on by the mid brain, but possibly in the hemispheres as well.

While thus classifying actions as voluntary and reflex, there is a sense in which all actions are reflex.

"The conclusion is not to be resisted that all the functions of the central nervous system, and all manifestations of life and mental activity, fall under the conception of reflex action. No ganglionic cell is functional without a sufficient reason, which is called the stimulus, in the language of physiology; no volition without motive, in the language of psychology."[1]

We have already alluded in the second chapter (*see also diagram*) to Dr. Alexander Hill's sensori-motor arcs or nerve currents, bringing sensation and causing motion, which are of three different lengths.[2] The shortest connected with natural

Nerve arcs not demonstrated.

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 226.
[2] Dr. Alexander Hill, "On Reflex Action," in Paper at Victoria Institute, 1893.

reflex go to and return from the medulla; the next connected with unconscious acquired actions going to and returning from the mid brain; while the longest go to and from the cortex, and are concerned with voluntary motion. All this is of course delightfully pat and clear, and within the intelligence of the "merest schoolboy" of ante-schoolboard days, which indeed is its chief objection; for the actual processes of nature are seldom so crude. Something similar may take place and probably does, but it must be remembered that these three lengthening arcs are entirely of the nature of a clever scientific guess rather than of a fact demonstrated by physiology or histology. The latest facts of histology clearly show (see chap. ii.) that there is no direct connection between the nerve fibres of brain cells, which end or commence apparently in the neuroglia or ground substance.

The idea is a good working hypothesis and by no means confined to Dr. Hill, being found in many physiologies; and if we use it simply as clearly illustrating the three leading different classes of brain action, no harm is done.

Phenomena of drunkenness.

Before leaving this fascinating subject, however, we have one more striking indirect proof of the practical division of the brain into these three regions, with the corresponding three classes of action in the well-known phenomena of drunkenness. Alcohol, as pointed out by Dr. Hughlings Jackson and many others, paralyses the brain from above downwards.

If a moderate amount of alcohol only be taken, paralysis does not supervene, but only general excitement of the nerve centres is seen. But if this is exceeded, symptoms of paralysis of the cortex are evident in the loss of voluntary will power and conscious control over actions, consciousness being also lost to a large extent; while at the same time the performance of the most complicated actions, singing well-known songs, or dancing well-known dances, shows the paralysis has not as yet extended deeply enough to reach the mid brain or the cerebellum—the small hind brain that governs always unconsciously the equilibrium of the body. Here is an instance of this state:—

A lady engaged to play at a private concert took too much to drink at supper, and the result was, she not only kept on playing too long when she returned to the piano, but whenever her fingers rested on the keys, she started playing like an automatic musical box, and could not be stopped.

If now more alcohol be taken a complete change takes place. As the paralysis extends lower, it involves the cerebellum; and the upright position, for some time a matter of difficulty, can now no longer be maintained at all, and the victim falls down on the floor. At the same time the mid brain shares the paralysis, and all complicated though unconscious habits cease. The man no longer sings or talks or dances, but is quite still. He is now "dead drunk," which means that the whole of the brain is temporarily paralysed with the

exception of the medulla, which still quietly carries on the functions of life, and will continue to do so, because at this stage the man always stops drinking and for a very curious reason. It is not because he wishes to, for his intelligent will power is long since abolished, while the craving remains; but it is simply because his arm is paralysed, and he can no longer mechanically carry the poison to his lips. But for this thousands would die of drink every night. Their salvation consists in one simple physiological fact; the arm is always paralysed before the paralysis has had time to reach the medulla. If now, however, some kind friend with his arm pours more alcohol down the person's throat, the medulla at last succumbs, and the man is no longer dead drunk, but dead.

Habits of thought.

So far we have only spoken of the activity of the mind as seen in actions, but we must point out here that the process in ideas and thoughts is very similar. If these be conscious their sphere is the cortex; if frequently repeated by degrees they become habits and become more and more unconscious and automatic. Of this we will give illustrations. Habit in thought is as well and truly formed as habit in action.

Now, what do we mean by habit?

It is difficult to conceive of habit with reference to inanimate objects, and the word is no doubt to some extent inapplicable, and yet it is interesting to speculate on the extent of its sphere of action.

Are the very laws of motion the result originally of

habit? Are the chemical combinations of elements and the formation of different constant natural compounds and mixtures the result originally of long-continued repetition forming at last habits with cast-iron bonds that cannot be broken? Again, do we not see in an old dress, even in a room, a something that speaks of habit, an adaptability of shape and crease from constant wearing and use, or of fittings and furniture, that cannot be seen in a new coat or in lodgings? Does not an old violin that has been the property of some great master (not only made by some great maker) retain in its very fibres the habit of resounding to the grand chords he struck, with far greater ease than any instrument that had not acquired this "habit" by long use?

Habit in the inorganic world.

Passing on to living things. Do not trees acquire habits of growth from their environment, and in the lower forms of animal life does not this open up the whole of the great question of the formation of natural reflexes or automatic action and instinct? Are the rhythmic pulsations of the jelly-fish or the movements of an amœba the outcome of purely reflex action, or were they, as Romanes has asked, at first voluntarily acquired habits passing by long use into hereditary reflexes?

Habit in man, as generally understood, means an act or thought or sensation, or any combination of these, simple or complicated, that has been sufficiently often repeated to no longer require the same intelligence and will-power for its execution that was at first needed. It thus becomes an acquired or an artificial reflex.

Nearly all natural instincts in animals have thus to be formed as artificial reflexes in man. In man artificial habits formed at will replace instincts of a fixed character, or, if you please, voluntary habits replace automatic habits. It is wonderful to note that even fixed habits that have passed (as we have suggested) long since into instincts or reflexes, can be modified by environment. It is the habit of all ova to build organisms in accordance with certain exact laws. But the ovum of a working bee can be made to produce a queen bee by altering the mother's food, and feeding her on royal bee bread.

The force of habit.

The force of habit is, however, very great, and is only short of natural reflexes, which are omnipotent in the body. No power of mind or will can stop the beating of the heart or the movement of the stomach, and a habit may be so formed as to be almost as difficult to check. Darwin found he had acquired, in common with most men, the habit of starting back at the sudden approach of danger; and no amount of will-power could enable him to keep his face pressed against the plate-glass front of the cage of the cobra in the Zoo while it struck at him, even though he exerted the full force of his will, and his reason told him there was no danger.

The Duke of Wellington is credited with the dictum that habit is as strong as ten natures, and certainly to see what a soldier will do and is worth in a campaign when seasoned and well drilled, compared with a raw recruit, one feels that this statement is under rather

than over the mark; for he owes all his value to "habit"! If an established habit is broken by the will the lower centres rise up in rebellion; so accustomed are they to the easy yoke of that which has been often repeated, that the effort of control required, as in the process of breaking a habit, over the lower centres, is often extremely painful.

Formation of habit.

In all cases of true artificial reflexes or habits the will is the starting point, and a purely voluntary action at first takes place. This is repeated continually until, as C. Bastian and others believe, a well-defined brain path is physiologically present in the brain, or, in the graphic language of Sir Michael Foster: "The will, blundering at first in the maze of the nervous network, gradually establishes easy paths. When once this is effected the slightest impulse seems to start the nerve current along the whole of the associated groups and produce the habitual action. The nerve current follows this route not now because it is guided by intelligence, but because this route offers the least resistance from habitual use."

Again:—

"So long as an idea or a sensation is not discriminated, even if the fact of its operation be demonstrable, it is not a conscious state. In the development of experience, processes which were at first unconscious in their operation, become by reflection conscious. On the contrary, in the development of will, processes which were at first conscious become motor-intuitions which

are unconscious and automatic. The action which originally was guided by the co-operation of two or more senses now becomes so far independent of them that the muscular sense alone suffices."[1]

Details to be observed.

There are one or two interesting points in the formation of a habit.

In the first place, the action must never be varied even for a day. If it be the learning of some steps in dancing they should never be changed till fixed in the brain. Again, it is of great importance that the habit be taught and executed accurately. If the steps are taught in a slovenly way they will always be executed in a slovenly manner.

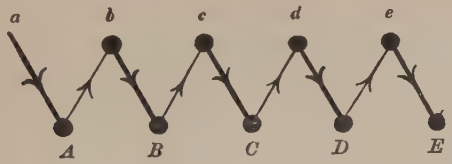
Again, fresh nerve paths tend to consolidate apart from actual repetition. A new task learned in the evening becomes easier to perform each morning than it was the night before, and easier still on Monday morning than it was on Saturday evening. The Germans go so far as to say that we learn to skate in summer and to swim in winter. What is exactly meant is that, having been taught skating one winter, the impression deepens unconsciously all through the summer, so that we begin much better next winter than we left off at the end of the preceding one.

Attention in the formation of the habit seems greatly to deepen its impression on the brain and make it much more easy to establish. A good memory, which is a psychical habit, is thus established by attention.

[1] G. H. Lewes, *Problems of Life and Mind*, prob. ii., p. 155.

A formed habit of average complication produces a sort of reflex peristaltic nerve current between the associated groups of cells. Supposing it is a question of learning the clog dance and alternately tapping the floor with the toe and heel in rapid succession, the process is somewhat like this—

Results of formed habits.



the small letters being sensory, and the capitals motor centres connected by the nerve threads of habit. The will starts this step by placing the toe on the ground by an impulse along the nerve from *a* to A. Before the habit was formed this would be all, but now it is but the first link in a long connected chain, along which the nerve current passes with great rapidity. The moment the toe strikes the ground, the sensation is passed to the brain along A*b*, and this is reflected as a motor impulse to strike the heel along *b*B. This in its turn producing a sensation along B*c*, starts the motion of toe-striking along *c*C, and thus the motion continues till stopped at E by the fiat of the will. (It must be understood these actual connecting lines or nerve threads have no proved existence.)

Lewes observes as to these actions :—

"A reflex act is a sentient act. We must fix clearly in our minds that unconscious and unsentient are not equivalent terms. Unconsciousness is a sentient state."[1]

Once a habit is well established on such lines as these, the interference of conscious will only spoils its perfect action. Whenever knitting or type-writing has become automatic, if you think about the formation of each stitch or letter, you have to work much more slowly, and are more liable to make mistakes. A fixed habit is thus deranged by volition.

The more fixed a habit becomes, the less of the body is required to execute it, and thus a great economy of force is effected. In commencing piano-playing, the young performer plays with her hands, and arms and body and legs and head, and often her tongue. As she forms a perfect artificial reflex, less and less of the body is moved, until at last it is literally nothing but the hands and wrists that are engaged, the conscious brain being at perfect rest, or thinking of something else altogether. Habit is thus of great economic value.

Importance of habit.

Habit, which is physical memory, is of such importance to character that a brain without such memory is either idiotic or infantile. Artificial reflexes last long if well formed. In early life Robert Houdin, the conjurer, trained himself in the difficult habit of reading aloud while keeping four balls going in the air. He did not practise this for many years, and yet after thirty years found he could still

[1] G. H. Lewes. *Problems of Life and Mind*, 3rd series, p. 97.

read and keep three balls going. Any one who tries this feat will understand its difficulty.

Artificial reflex habit resembles respiration, and still more coughing, in that these occur naturally by reflex action, but can be modified or stopped by the will.

Habits, in spite of Weissmann, formed during life strongly tend to become hereditary. This is clearly seen in the love of strong drink.

Habit gives ease.

Ease and perfection in any pursuit entirely depend upon the degree in which it ceases to be connected with consciousness and is carried on sub-consciously. Playing the piano, skating, bicycling, skilled trades, and indeed almost everything, depend for their perfect execution on the power of the sub-conscious mind, which is only hampered when interfered with by the conscious mind. "The pen of a ready writer," as Miss Cobbe says, "seems to dip itself into the ink at the right time, to form of itself all the words, and even to select different words to begin each sentence, and to avoid terminating them with prepositions, while all the time the conscious mind of the writer is deeply occupied with the plot." The marvels of playing a brilliant piece on the piano, while at the same time conducting a vigorous conversation, show also the greatness of our unconscious powers, especially when we remember that Sir James Paget has pointed out that in rapid playing the finger moves twenty-four times a second, each movement involving at least three muscular acts, which, if multiplied by ten, gives 720 impulses *per second* for both hands. It is likely that

when habits or artificial reflexes are established in the brain the current of sensation and ensuing motion never goes up to the cortex at all for orders from the conscious mind, the action being "short-circuited" in the middle brain or basal ganglia. And it is not only actions that are short-circuited, by habit. (*See diagram.*)

Let us now consider a few leading habits—physical, mental, and moral.

Physical habits.

Physical habits are innumerable; they extend through all our being, are insensibly being formed whenever an act is repeated sufficiently often, and are generally only recognised when it is too late to alter them.

They are amazing in their intricacy and variety, as well as in the extraordinary ease they give when once firmly established in the performance of the most difficult and at first impossible tasks.

The old saying, "It's nothing when you are used to it," or the couplet,

> If at first you don't succeed,
> Try, try, try again,

simply means, "If a thing is too hard to do, establish a habit and you will accomplish it".

Mental and moral habits.

We pass now to other actions of the unconscious mind once performed within consciousness, but which by practice have become reflex in character. We refer to those that produce thoughts, ideas, and all mental and moral habits. Some would relegate all processes which by continuance have become

habitual to material agencies, and deny altogether their mental character simply because they are unconscious. This is well answered as follows :—

"That which is realisable now, or capable of being recalled to consciousness, may after a time cease to be so, and yet the essential nerve actions themselves may still go on, and work their influence upon our fleeting succession of conscious states. And shall we cease to call a given nerve action (or rather its results) psychical, when by frequent repetition it has become so habitual that it no longer arouses consciousness?"[1]

Habit stronger than will.

I would remark here that in what we call voluntary actions all we do is to will a result, as of raising the hand to the mouth. The ease with which we do it and indeed the power to do it at all arise, not from our will-power being able to control the so-called voluntary muscles, but in their association by unconscious mental action for the purpose by long established habit. Where no such habit exists an action becomes well nigh impossible, however strongly it may be willed. By long habit, hereditary in nature, we always swing our right arm with the movement of our left leg, and the left arm with the right leg. Let any one *will* the contrary, *i.e.*, to move the right arm with the right leg, and *vice versâ*, and, however strong the effort of will may be, they will find in the end that it is powerless to overcome this established habit, except most awkwardly, and for the shortest time. The intense difficulty of the one

[1] C. Bastian, *Brain as an Organ of Mind*, p. 523.

movement and the perfect ease of the other, both in themselves equally easy, are most striking.

Habit can do more than will.

Let any one *will* to play the violin, or to skate, or swim, or in short to do anything that requires the formation of habits, and they will see it is impossible, and that to do so at all a habit must necessarily be formed for the very purpose; and then, behold! the thing which was impossible to perform by conscious will-power is executed by unconscious forces with almost contemptuous ease. Few of us know what bundles of habits we are, and we imagine many of our actions to be voluntary which are really artificially automatic. Let any man over forty try to wash and dress himself in any but the accustomed order, and he will see what difficulties arise. He may not know the order in which he washes his face, but the hands know. He cannot tell which arm is put into the coat first, but the arms know. He cannot tell which foot is put into his stockings first, but the feet know. Before I begin to dress, from long habit I am almost compelled to pull up the blind a certain exact height, and if I fail to do so, I feel an inward impulse that is not satisfied till it is obeyed.

Consider the habit of shooting—the perfect ease with which the trained sportsman, the moment the grouse rise, aims and fires well nigh automatically at the birds, which themselves have acquired *fin-de-siècle* habits (as Sir Joseph Fayrer has told us) in learning unconsciously to avoid the telegraph wires as they fly, which in earlier times they always struck against.

Look what an automaton a soldier becomes, so that the very dinner he may be carrying, as Huxley tells us, is dropped unconsciously into the gutter if he hears the magic word "'Tenshun," which in his mind is so associated with his little finger and the seam of his trousers that his hands at once fall to their allotted place. But time would fail us to describe the marvels of physical habits, and we must pass on, especially as we have still greater wonders in store.

"While consciousness necessarily attends the formation of an act of reason, when it has been done a thousand times and becomes habitual, it becomes unconscious."[1]

"When the human brain has, by a long routine of similar functions, grown to a certain set form of feeling, thinking, and action, its work is nearly as automatic as animal instinct, *i.e.*, consciousness is nearly abolished."[2]

We may add, our knowledge only becomes perfected or unhesitating when it becomes automatic, and is exercised without further conscious effort of mind.

Practical value of habit.

Habits of thought then are as truly and readily and often unconsciously established as habits of body, and indeed the two are sometimes inscrutably mixed; as in character as displayed in handwriting as well as in the lines that habit has traced upon the face, rendering physiognomy a true science. We have also ideal habits, and here as elsewhere habit means ease.

[1] Maudsley, *Mind*, vol. xv., p. 171. [2] *Ibid.*, vol. xii., p. 513.

For instance—

"Habit would tend to make the transition from memory to the expected more and more rapid, automatic and unconscious. If there is a 'process of inference' it is one which has the minimum of consciousness."[1]

Repetition soon produces unconsciousness as the thing becomes habitual. Time deadens sorrow. The poor are accustomed to poverty, to food, smells and sights. Other instances occur. Soldiers in war, sailors in a storm, nurses and students in hospital. "It is nothing when you're used to it."

We will not now pursue the fascinating subject of the formation of these in detail; for when we come to speak of the development and training of the unconscious mind it will all come before us; but will pass on briefly to consider—

First the value of habits as a whole, and lastly their drawbacks; for they have drawbacks.

What habit does for a man.

Habit is economical. It has been well described as using the interest of nerve energy instead of the principal. The absence of fixed habits is misery, and is the source of indecision of action and of character quite as much as deficient will-power.

Habit alone, as we have seen, enables things otherwise impossible to be accomplished, such as playing the flute, violin or piano. But for habit we should spend a whole day in doing one or two things with great fatigue of mind and body, such as in the continued effort to balance the body in the erect

[1] J. Sully, *Illusions*, p. 300.

attitude by sheer force of will, or to read a book, or to walk.

Habit gives speed, accuracy and ease. The will, we have seen, can only set habits in motion, and is powerless to act when such do not exist. The unconscious ease of a well-formed habit has been well illustrated by fixing a wafer on a looking-glass, and while keeping the eyes fixed on it, moving the head in a circle. The eyes will be seen to be moving in every part of the orbit, but cannot otherwise be known to move at all : so unconscious and without effort is the action of the complicated muscles that move them, which, by the way, are all so-called voluntary muscles.

Habit forms character, or at least a good deal of it. Up to a certain point our character is formed *for* us by heredity, beyond this it is formed *by* us by habit. Skill is entirely the result of habit. To seek to be ambidextrous is not generally desirable. Specialism is everything in the body, and the habits that suit the right hand do not suit the left, nor the left the right. The left hand is just as awkward with a knife as the right is with a fork. Some callings may require a certain measure of ambidexterity, but it is against the principle of true development, and is common in idiots.

After much trouble or loss the mind unconsciously adapts itself to the new circumstances, and when once habituated to them, the change ceases to rise into consciousness.

Habit thus adapts us to our environment, without which we should die. A bookbinder in a little den in

Paternoster Row may be as happy and healthy as a farm labourer in the Midlands. Each has become adapted to his environment by habit. Let them change places, and the chances are both will die. Sir Charles Lyell tells us of some English greyhounds exported to South America for coursing hares on a raised plateau some 6000 feet high. They were useless on account of the unaccustomed rarity of the air, but they produced pups which could course as well as the dogs of the country from a formed habit. Some habits are the offspring of necessity, others of caprice.

Drawbacks of habit.

But there is another side to habit that must be alluded to in conclusion, and that is its drawbacks. An illustration will explain this. In suburban dwellings, with a garden and locked gate in front, there is often an arrangement by which the gate can be opened from the house by pulling a handle that raises the gate latch. When the gate bell rings in the hall it is equivalent to a sensation reaching a conscious brain. The maid then comes and looks out to see who is there before she pulls the handle. If it is a person she wishes to admit, she pulls the handle which lifts up the gate latch. The maid is the conscious mind which considers the sensation received by the brain, and does not send a motor impulse until the will determines what shall be done. This is a type of a pure voluntary action.

If, however, to save herself trouble, the girl fastens the wire that should ring the bell round a pulley in the hall to the wire that opens the gate, the result will be

that when a man pulls the bell handle, he rings no bell but opens the gate by a reflex action. This is the formation of an artificial reflex, only in the body it cannot be thus made at once by the will; but must be gradually formed by frequent repetition, and moreover is never a true mechanical or reflected action, but always involves a mental though now unconscious element.

The advantages of the *voluntary* action were—the maid could admit whom she pleased, and none could enter without her knowledge and consent. The drawbacks were—it took her nearly all her time to answer the bell, and the man had always to wait for a time at the gate. When the action is changed into a *reflex* one, the advantage is that the man is never kept waiting, for pulling the wire opens the gate, and the servant never has to answer the bell. The disadvantage is she no longer knows or can consciously control who enters the garden.

Habits thus may become our masters. Girls who drill holes in buttons in Birmingham are said during their dinner hour as they pass along the streets to be constantly continuing unconsciously the same movements with their fingers.

In habits muscles may often be used to excess with bad results. Hammer-palsy arises from incessantly using the hammer in making knives till the associated group of cells is worn out, and paralysis sets in; writer's cramp is another illustration.

Habits that have become unconscious may be put in action by using wrong stimuli. When dressing for

dinner one frequently winds up one's watch by mistake, and some in changing their clothes have gone to bed unconsciously.

Bad habits.

A bad habit is a terrible thing when thoroughly fixed. Swearing is a good example of this, and of the tenacity of a habit when firmly established. It is a grave moral drawback when processes that should be intellectual become mechanical by habit, as when prayer is said by rote and not prayed; it is this that constitutes all forms of "cant".

Habit blunts the consciousness both as to right and wrong and as to pleasure and pain, and when purely automatic abolishes it. A man may get such an inveterate habit of lying as to lose all sense of evil. So with other sins.

A person travelling or yachting takes great pleasure in it at first, but if he is ever doing this and gets into the habit of the thing, it loses its charm.

Games amuse when occasionally played, but when they are incessantly pursued, and an automatic habit is established, a large amount of the pleasure goes.

Habit may induce error, as when at the close of the year, for some days, the same date is carried on into the next year, until the new habit overcomes the old.

Summing up, therefore, we see that while one out of the three classes of brain action is fixed (the natural reflex), one of the remainder (the artificial reflex) is being gradually formed during life out of the third by transforming voluntary conscious actions, thoughts and ideas by frequent repetition into habits, when they be-

come involuntary unconscious actions, thoughts and ideas; with the result that generally they proceed with greater ease and less mental and bodily fatigue: the change from the one to the other being, as a rule, beneficial, though associated with many drawbacks, some of which we have enumerated.

CHAPTER VII.

THE UNCONSCIOUS MIND AND ITS QUALITIES—MEMORY AND SLEEP.

Order of the chapter.

In our last chapter, in speaking of habit, we necessarily touched upon unconscious habits of thought, and showed how, by repetition, thought can proceed unconsciously. We will now go further into the subject; first of all, once more briefly establishing the fact that there are unconscious thoughts, and then proceeding to give some descriptive illustration of their action. We will then point out various qualities in character that depend upon them, entering with some detail into the quality known as apperception; and finally will touch on the action of the unconscious mind in memory and in sleep.

Unconscious ideas asserted.

As to unconscious ideas, Kant observes: "To have ideas and yet not be conscious of them—therein seems to lie a contradiction. However, we may still be mediately aware of holding an idea, though we are not directly conscious of it."[1]

Again Maudsley says:—

"It may seem paradoxical to assert not merely that

[1] E. Kant, *Anthropologie*, p. 5.

ideas may exist in the mind without any consciousness of them, but that an idea, or a train of associated ideas, may be quickened into action and actuate movements without itself being attended to".[1]

"When an idea disappears from consciousness, it does not necessarily disappear entirely; it may remain latent below the horizon of consciousness. Moreover, it may produce an effect upon movement, or upon other ideas, when thus active below the horizon of consciousness."[2]

"It behoves us to be on our guard against considering consciousness as co-extensive with ideational function."[3]

Leibnitz says: "It does not follow because we do not perceive thought that it does not exist. It is a great source of error to believe there is no perception in the mind but that of which it is conscious."

The working of unconscious ideas and their influence is well described by Ladd and others.

"They occur somewhere and somehow."

"The influence which determines every chain of associated ideas . . . seems largely to enter only partially into consciousness; they belong in large measure to the mental region, which is 'subliminal,' or below consciousness. Indeed, the perception of every object . . . goes on to a very large extent *somewhere* and *somehow*, so as to escape the eye of conscience."[4]

This "somewhere and somehow" recalls the "some-

[1] Maudsley, *Physiology of Mind*, p. 289. [2] *Ibid.*, p. 305.
[3] *Ibid.*, p. 305. [4] G. T. Ladd, *Philosophy of Mind*, 1895, p. 380.

what and some One" of the same writer, quoted in a previous chapter. Both escape by their vagueness the admission of the unconscious mind.

"The more we examine the mechanism of thought, the more we shall see that anterior unconscious action of the mind that enters largely into all its processes."[1]

"People who talk most do not always think most. I question whether persons who think most—that is, have most conscious thought pass through their minds —necessarily do most mental work. Every new idea planted in a real thinker's mind grows when he is least conscious of it."[2]

Then, as to actions. "It would go hard with mankind indeed, if they must act wittingly before they acted at all."[3]

Unconscious mind action.

"Men, without knowing why, follow a course for which good reasons exist. Nay, more. The practical instincts of mankind often work beneficially in actual contradiction to their professed doctrines."[4]

They are, in short, better than their creeds; for common-sense, one of the four internal senses of the Aristotelians, is the judgment or voice of the unconscious mind.

We will now give one or two illustrations of the action of unconscious ideas in every-day life.

Illustrations of it.

"The most voracious plagiarist is commonly the most unconscious; the best thoughts of our authors are the unwilled thoughts which surprise him-

[1] Prof. O. W. Holmes, *Pages from Odd Volumes*, p. 204.
[2] *Ibid.*, p. 289.
[3] Maudsley, *Physiology of Mind*, p. 13.
[4] *Ibid.*, p. 12.

self; and the poet, under the influence of creative activity, is, so far as consciousness is concerned, being dictated to."[1]

"When waiting on a pier for a steamer, I went on to the first, which was the wrong one. I came back and waited, losing my boat, which was at another part of the pier, on account of the unconscious assumption I had made, that this was the only place to wait for the steamer."[2]

"I saw a man enter a room and leave by another door. Shortly after, I saw another man exactly like him do the same. It was the same man; but I said it must be his twin brother, in the unconscious assumption that there was no exit for the first man but by the way he came (that by returning)."[3]

"The firmest resolve or purpose sometimes vanishes issueless when it comes to the brink of an act, while the true will, which determines perhaps a different act, springs up suddenly out of the depths of the unconscious nature, surprising and overcoming the conscious."[4]

In connection with this, our readers will remember how many psychologists afford an illustration of a somewhat similar process in their writings. You see as you read them that they are consciously determined to support the definition that "mind is consciousness," but that their unconscious mind, which has a contrary conviction, and a determination perhaps to prove its own

[1] Maudsley, *Physiology of Mind*, p. 33.
[2] Anon., "Study in Psychology," *Macmillan's Magazine*, 1882.
[3] *Ibid.*, 1882.
[4] Maudsley, *Physiology of Mind*, p. 417.

presence and power, continually gives them away by leading them unconsciously to use language and to make admissions that postulate its existence.

The depth of certain clear convictions, such as "two straight lines cannot enclose a space," lies deep in unconsciousness from transmitted impressions.

Notice also the unconscious intellectual preadjustment of mind—at a theatre, for instance, as compared with a church.

Inner consciousness.

Proceeding to the enumeration of definite qualities and characteristics arising from the unconscious mind, we may mention the term "inner consciousness," out of which so many marvels have been evolved; innate ideas and all fundamental truths are, as a rule, unconscious; impulses are of unconscious origin, desires generally of conscious. "Instinct" is an unconscious modification of intelligence.[1] Sully, however, says:—

"Instincts are conscious, though not actuated by conscious purpose".[2]

Intuitive insight is an instantaneous automatic or "unconscious" mode of interpreting another's feelings.

Carlyle says, speaking of a man with unconscious intellectual powers: "Such a man's work grows up without consciousness from the unknown deep in him".

"We arrive at the unconscious by ascertaining the influence it may have on conscious life, as we discover an invisible planet by the perturbations it produces. We infer the unconscious from its well ascertained

[1] Ribot, *Heredity*, p. 21.

[2] Sully, *Mind*, vol. vi., p. 115.

conscious results. We discern from their effects unconscious pleasure and pain, whence come our (apparently) causeless joy and sadness. All instincts of modesty, shame, mother's love, etc., spring from the unconscious depths of our being."[1]

Von Hartmann denies unconscious memory, but exalts unconscious will. "Every act of will," he says, "is a reflex act, therefore every reflex act is an act of will."

Life and consciousness itself, other than our own, is not a process of reasoned inference, but is the result of intuition or unconscious reasoning.

Unconscious influence.

Our unconscious influence is the projection of our unconscious mind and personality unconsciously over others. This acts unconsciously on their unconscious centres, producing effects in character and conduct, recognised in consciousness. For instance, the entrance of a good man into a room where foul language is used will unconsciously modify and purify the tone of the whole room. Our minds cast shadows of which we are as unconscious as those cast by our bodies, but which affect for good or evil all who unconsciously pass within their range. This is a matter of daily experience, and is common to all, though more noticeable with strong personalities.

Apperception.

We now pass on to the interesting subject of "apperception" and its relation to the unconscious mind. For this subject we quote largely from Lange.

[1] Ribot, *Heredity*, pp. 226, 228.

"Apperception is that psychic activity by which individual perception, ideas, or idea complexes are brought into relation with our previous intellectual and emotional life, assimilated with it, and thus raised to greater clearness, activity and significance." [1]

"In all ordinary cases we are hardly conscious of apperception as a specific activity. We ascribe to the object of perception what has been added to it by our own minds. Apperception seems to proceed of itself, without our express will, and not seldom even against our will." [2]

In other words, to every object consciously perceived vividness of detail and stores of information are added unconsciously from the stores laid up in the unconscious mind. I see a tiny rod of steel at a distance, and I at once know it is a needle for sewing, has an eye and a point, is smooth and brittle. All these ideas are instantaneously added unconsciously to the conscious visual perception of the bit of steel; this is apperception.

"With the assistance of unconscious spiritual elements standing near the threshold of consciousness, we feel dimly what relations exist between the new perception and our former experiences." [3]

"We test all ideas lying close to consciousness, to see which of them may most approximately be united to the perception or require a previous transformation. We 'collect' our thoughts." [4]

"A perception or idea becomes the subject of ap-

[1] Prof. Lange, *Apperception*, p. 41.
[2] *Ibid.*, p. 15.
[3] *Ibid.*, p. 17.
[4] *Ibid.*, p. 18.

perception if, upon its entrance into consciousness, it finds more or less response; *i.e.*, calls up our ideas. . . . Well-known perceptions are assimilated quickly. If, on the contrary, the new . . . is but partly similar to that which we already know, then the apperception is . . . completed but gradually, and we become conscious of it as mental labour." [1]

It is an unconscious faculty.

"In emphatically calling attention to the importance of unconscious ideas, as well as that of feelings and affections, words and volitions, for the purpose of apperception, Lazarus offers a valuable aid to Herbart's view. For the (unconscious) forces that guide the masses of ideas are the secret powers of the emotional soul (Gemmuth). To understand them means to recognise the deepest motives and causes of apperception." [2]

"The soul naturally takes hold of a new impression which . . . fills consciousness, but there are also unconscious elements active in the process of apperception, which, with the contents of consciousness, form one group. In the act of thinking, in all work of inventing, the conscious action of the mind is constantly asserted and determined by reverberating unconscious ideas."

"Indeed, to the latter may even be credited the real creation, the thinking, finding, establishing. The real process of apperception on the creation of new formations takes place unconsciously." [3]

[1] Prof. Lange, *Apperception*, p. 43. [2] *Ibid.*, p. 268.
[3] Lazarus, quoted by Prof. Lange, *Apperception*, p. 267.

Here is an illustration of apperception from another source :—

"It is obvious that mental events include unconscious events. Unconscious mental events are not confined to reception, termination and changes of unconscious knowledge. They include redintegrative operations. As when the burnt child inserts the idea of ardent heat into the next luminous thing it sees, they include the latent bearing of *likeness* on the mind, to which we are indebted for recognition, and from grouping the *minima visibilia* into bodies, and bodies into flocks, herds, etc. They include the latent mental process which begets our knowledge of primary kinds, and our knowledge of our own customs." [1]

Value of apperception.

"Many a weak, obscure and fleeting perception would pass almost unnoticed into obscurity did not apperception hold it fast in consciousness. We see and hear, not only with the eye and ear, but quite as much with the help of our present knowledge, with the apperceptive content of our own mind." [2]

"We have undoubtedly perceptions that are never perceived. Such, on account of flagging attention or of transient character, sink rapidly under the threshold of consciousness." [3]

Let me give an instance of this. The other day I was driving by a strange road to a small country house by the roadside, where my family were staying for the

[1] Anon., "Study in Psychology," *Macmillan's Magazine*, 1882.
[2] Prof. Lange, *Apperception*, p. 21. [3] *Ibid.*, pp. 13, 14.

summer. The road brought me to the house by a new approach. I drove past the gate, saw the house beyond, and went on deliberately without, in the least, recognising it; and it was only when I reached a well-known turning a quarter of a mile further on that I was forced to realise what appeared incredible: that I had failed to recognise my own house, because apperception had not been joined to perception. The new point of view had called up no association from the unconscious mind.

"There are innumerable perceptions of which we do not become conscious, on which all actions performed without deliberation, as well as habits and passions, depend."[1]

"Why do we, after a lapse of time, need to read an article of our own composition, and why does it then, to our surprise, often make an impression quite different from that which we had when we wrote it? Because now other trains of thought come to meet it, which, during the composition, were kept out of consciousness."[2]

This last quotation brings us to the consideration of memory and how far it is related to, or is a power of, the unconscious mind; for it must be remembered that in this work nothing can be assumed. Not only is the fact of the existence of any unconscious mind at all denied, but the action of every faculty that might possibly be supposed to

Memory is a faculty of unconscious mind.

[1] Leibnitz, quoted by Lange, *Apperception*, p. 247.
[2] Lange, *Apperception*, p. 20.

exhibit its powers is carefully explained by some other hypothesis.

We assert that memory is a faculty not only of conscious states, but of unconscious; but then we must prove this, for we fear the *ipse dixit* of the writer alone will be by no means sufficient.

There are, then, two hypotheses as to memory.

1. Do the ideas persist as unconscious psychical phenomena? *i.e.*, sensations fallen below the threshold of consciousness; or

2. Do they not exist at all as psychical phenomena, but are retained because of the persistence of certain changes, traces, or dispositions in the nerve centres?

This is one of the "*cruces* of psychology".

"Objections," says Maudsley, "to the supposition of unconscious ideas laid by inactive in the mind are not far to seek."

"Ideas," Herbert Spencer remarks, "are like the successive chords brought out from a piano. And it would be as proper to say that these passing chords thereafter exist in the piano as it is proper to say that passing ideas thereafter exist in the brain."[1] "But what about the performer in the case of the piano and the brain respectively? Where, in the illustration, is the equivalent of the harmonic conceptions in the performer's mind? And there is this difference between the passing chords in the piano and in the brain, and it is of the essence of the matter, that in the former case the chords do pass and

Latent ideas or memories have a physical basis.

[1] Herbert Spencer, *Principles of Psychology*, vii., p. 485.

leave no trace in the structure of the piano, while in the latter they do not, without leaving the most important after-effects in the structure of the brain. Whence *does* arise, in due time, a considerable difference between a cultivated piano and a cultivated brain. Those who speak of latent ideas do, therefore, endeavour to denote thereby an important something which Mr. Spencer's analogy leaves out of sight." [1]

"Memory is the power of retaining knowledge in the mind, but out of consciousness; I say retaining knowledge in the mind, but out of consciousness. We must further be endowed with a faculty of recalling it out of unconsciousness into consciousness; in short, reproductive power." This bold and decided utterance is by Sir William Hamilton, and is criticised by Bain, writing on Hamilton's "conservative faculty," thus: "Of conservation apart from reproduction, we know nothing. It is a nonentity." [2]

"Memory depends on a number of latent and involuntary physical conditions, as well as on a number of conscious and involuntary mental conditions." [3]

"As the seat of memory is entirely below the plane of consciousness, the mind is not conscious of the processes of direct revival, and they are not under voluntary control; thus, we cannot help remembering that a boat *is* a boat or a fire *is* a fire, when we see either." [4]

[1] Maudsley, *Physiology of Mind*, p. 70.
[2] Bain, *Senses and Intellect*, 4th edition, Appendix, p. 697.
[3] R. H. Hutton, *Contemporary Review*, July, 1874, p. 204.
[4] Dr. Edridge Green, *Memory*, 2nd edition, p. 114.

As to the physical seat of memory, Dr. Green is quite clear.

"The *optic thalami* and the *corpora striata* are the seats of sensory and motor memory respectively."[1]

Again, "Memory becomes less conscious as it becomes more complete; until, when (in action) it has reached its greatest perfection, it is entirely unconscious".[2]

"Memory is not to be viewed as strictly pertaining to consciousness, but rather as a property of unconsciousness."[3]

The knowledge, for instance, involved in recognition is, for the most part, unconscious; moreover, there is often an interval between sight and recognition; and voluntary conscious effort often fails in recalling what is wanted, which, shortly afterwards, is suddenly presented by some unconscious mental process.

Illustrations of memory.

"A somnambulist forgets, when he awakes from being hypnotised, all he does or says (latent memory), but can be made to recall and repeat all by the simple assertion of the hypnotist that he can do so, and this without falling asleep again."[4]

The Rev. W. S. Lach Szyrma, Newlyn St. Peter, Cornwall, writes: "In early childhood I had two prominent day dreams, which I have seen hundreds of times in childhood.

"1. A large village with a stream and small bridge and church; a road going north and a park on the east.

[1] Dr. Edridge Green, *Memory*, 2nd edition, p. 205.
[2] Maudsley, *Physiology of Mind*, p. 514.
[3] Prof. Hering, *Über das Gedachtniss*, 1876.
[4] Prof. Bernheim, *Suggestive Therapeutics*, p. 146.

"When an undergraduate at Oxford, my mother arranged my going to Addenbury, where our family have been since 1800 at times, and where she had spent her childhood. This was the village of my dream.

"2. A large village near the sea with a very steep hill, descended in steps. The houses in terraces with woodlands above.

"Till July, 1889, I never saw Clovelly, where my maternal ancestors had long lived (Carys) at Cary Court. This was my second dream village."[1]

Excluding possible sources of fallacy, this is a valuable testimony in favour of hereditary memory.

In disease we get traces of the action of memory. Creighton observes:—

"Neurotics are those whose unconscious memory is particularly strong;"[2] a far-reaching observation that we shall allude to later on when speaking of the unconscious mind and disease. Memory (organic) has been thought by some to be traceable in ague and other organic diseases. Memory is traced by Creighton in a case of a mesoblastic tumour that reproduced embryonic tissues, and he says "nothing marks so generally these diseases of life as a recrudescence in the activities of cells, etc., reverting to modes of life they had come through".[3]

Unconscious memory.

Memory as exhibited in habit, we have already touched upon. Here its action is entirely unconscious and is undoubtedly mainly psychical, though possibly

[1] *Journal of Psychical Research Society*, Dec., 1895, p. 351.
[2] C. Creighton, *Unconscious Memory*, p. 102. [3] *Ibid.*, p. 37.

assisted by the formation of connecting nerve paths, between the groups of cells occupied in carrying out the habitual act of thought.

Lines on unconscious memory.

A beautiful instance of the action of unconscious memory quoted by C. Mason in *Home Education* may fittingly close this section :—

> Those beauteous forms (Tintern Abbey)
> . . . . . .
> Oft in lonely rooms and 'mid the din
> Of towns and cities I have owed to them,
> In hours of weariness, sensations sweet,
> Felt in the blood and felt along the heart,
> And passing even into my purer mind
> With tranquil restoration : feelings, too,
> Of unremembered pleasure : such, perhaps,
> As have no slight or trivial influence
> On that blest portion of a good man's life,
> His little nameless unremembered acts
> Of kindness and of love.[1]

The profound psychology of the poet is quite amazing in these lines. He shows truly how the thoughts from the unconscious mind dilate the capillaries and quicken the circulation and the heart's action, before they are perceived in consciousness. He talks with strictest scientific accuracy of "feelings of unremembered pleasure," or, in other words, of the physical effects of unconscious memory that have not yet penetrated into conscious recollection.

How forcible is such an accurate description of what is actually experienced, compared with the pedantry of

[1] Wordsworth, "The Memories of Tintern Abbey".

laboured abstract reasoning from false premises and false conclusions. We appeal to the individual experience of our readers to corroborate the testimony of the poet to the remarkable and *à priori* unlikely fact, that the feelings of some unconscious memories constantly precede their recognition in consciousness.

Unconscious mind in sleep.

Turn now to the action of the unconscious mind in sleep. This again is another *crux* for narrow psychologists, and very hard for them to explain, even with the free use of sub-consciousness, obscure consciousness, sub-liminal consciousness, and the like.

"I have gathered," says Calderwood, "a number of examples of mental activity during sleep, which give evidence of concentrated intellectual effort, such as a continuous course of reasoning reproduced after waking; listening to a lengthened discourse, which must have been composed by the sleeper, reflecting on a problem and experiencing such satisfaction with the result that the person awoke, got up at once and wrote out the results."[1]

The writer has known an authentic case of a clergyman whose whole subsequent course of life was changed as the result of a sermon preached by himself to himself in a dream.

"Wherever self-consciousness is subdued, when the known and clamant 'me' retires to the background, then an opportunity is afforded for the emergence of the 'other me' of that large and unrecognised part of

[1] Prof. Calderwood, *Relations of Mind and Body*, p. 42.

our personality which lies below the threshold of our consciousness."[1]

The physical cause of sleep is thus lucidly explained by Prof. Dercum. Like many other "lucid explanations" of brain processes, the truth of it has yet to be established.

"By Dercum sleep is explained in a very simple (?) manner: 'The cortical cells in the motor area have processes extending toward the surface—dendrites—and a protoplasmic process extending downward through the white matter of the brain, the internal capsule, the crus, the pons, the medulla, and into the spinal cord, where it terminates in a brush-like extremity—the end tuft. Here it has a certain relation with the motor cells in the anterior horn of the cord—probably one of contact, though that is not definitely known. If the nerve cells retract this contact is broken; if the abnormal contraction of the nerve-process is relieved for the time being contact once more takes place.' Evidently, if the neurons are functionally active their dendritic processes must be in contact; without this, consciousness is impossible. When the nerve cells are exhausted by fatigue there is every reason to believe that their volume shrinks, and it is, therefore, more and more difficult for them to remain in contact. When relaxation comes, the processes retract, and unconsciousness, that is, sleep, supervenes."[2]

[1] Prof. Barrett (Dublin), *Humanitarian*, 1895.
[2] Prof. Dercum, Philadelphia, quoted by Prof. Wilcox, New York, in *British Medical Journal*, 1897, p. 865.

During sleep our thoughts range themselves anew. The powers of the unconscious mind can often do more in this way than the most arduous effort, in arranging facts and ideas, in due proportions. Hence we like to sleep over a thing before deciding ; and judges in a difficult case always like to take time to deliver judgment—often on the morrow.

Our dreams often reproduce our natural character as it is when not modified by conscious will and mind power. The difference is often startling. Few of us but must be surprised with the difference of our characters asleep and awake. In dreams the natural deformities of our dispositions are revealed, which in waking life are modified or repressed by consciousness and culture.

Dreams.

" The frequently immoral character of the unconscious mind as seen in dreams, in which we commit all sorts of crimes without compunction, tallies with the Kantian doctrine that the moral will is the true *Homo Noumenon* —the self of man." [1]

We have seen already that a uniform thought in consciousness soon sinks into the unconscious; in the same way a uniform sound is practically no sound. At first our rest is hindered in sleep by it, but afterwards only if it stops.

It will be remembered that in chapter iv. we gave some most remarkable evidence from some 200 university students and professional men, of whom 151 were men and forty-nine

Unique evidence of mind action in sleep.

[1] F. P. Cobbe, *Darwinism*, p. 314.

women, collected by Professor Child. We now give their further evidence as to sleep:—

"1. 'Do you dream?' 94 per cent. answered 'Yes'.

"2. 'Do you talk in sleep?' 48 per cent. answered 'No,' and 40 per cent. answered 'Yes'. Of these, 37 per cent. can answer a question intelligently in sleep, 27 per cent. on any subject, 43 per cent. only on the subject they are talking of in their sleep.

"3. 'Can you wake at a given hour, determined before going to sleep, without waking up many times before?' 50 per cent. answered 'Yes,' 31 per cent. answered 'No'.

"4. 'If you can, how about failure?' 69 per cent. seldom failed, 25 per cent. often.

"5. 'Do you come direct from oblivion into consciousness?' 64 per cent. answered 'Yes,' 16 per cent. gradually.

"Example 1. 'I had to give medicine every two hours exactly, to my wife. I am a *very* sound sleeper, but for six weeks I woke up every two hours, and never missed giving the medicine.'

"Example 2. 'I can always wake five minutes before the hour I set the alarum.'

"Example 3. 'I had had little sleep for ten days, and went to bed at nine, asking to be called at midnight. I fell asleep at once. I rose and dressed as the clock struck twelve, and could not believe I had not been called.'

"6. 'During sleep, have you ever pursued a logical train of thought and reached a conclusion—the steps and conclusion being remembered when wakened?'

To this, 59 per cent. answered 'No,' and 31 per cent. 'Yes'. 17 per cent. say the conclusions are as good or better than in waking life, 18 per cent. that they are less accurate.

"Example 1. 'I have played an entire game of chess in my sleep. On waking, I played the game over and it seemed consistent. I do not think I ever played that game (though a good chess player) before, and I could not play it now.'

"Example 2. 'I have slept over an unsolved problem in algebra, have dreamt each step and remembered them, and in the morning solved it easily.'

"Example 3. 'In Worcester I read and scanned some fifty lines of Virgil not yet translated. I felt tired, but, in sleep, accurately translated it all, and remembered it on waking.'

"Example 4. 'I had long tried to balance accounts, but always showed an excess of £2 10s. on the credit side. On Saturday night I left the counting-house nervous and angry. In the night I dreamed I was in the office, the ledger open, and I came to a small account having a debit balance of £2 10s. I looked over it, called myself names, and put it in its proper place in the balance in my sleep.

"'On Sunday I rose and went to call on some ladies to go to church. Suddenly the dream flashed on me. I went for the keys and to the safe and got the books, turned to the folio in the ledger I had dreamed of. There was the account and my balance was made.'" [1]

[1] Prof. Child, *American Journal of Pyschology*, vol. v., pt. ii.

We think our readers will agree that it is impossible to overrate the importance of this evidence as showing the action of the unconscious mind in sleep.

Further examples from R. L. Stevenson and others.

"Mr. A. Brocklebank, 20 Marsdon Road, East Dulwich, S.E., lost a pocket-knife, and six months after, having quite forgotten his loss, dreamt it was in the pocket of an old pair of trousers, where he found it."[1]

"At Morley's Hotel, at five on Tuesday, 29th January, 1889, I found I had lost a gold brooch at Swan & Edgar's. I sent there, but it was not found. I dreamt it was shut up in a certain page of *The Queen* newspaper. I went the next day; the papers were moved, but I found and pointed out *The Queen*. There was my brooch."[2]

R. L. Stevenson shows how his dreams increased in complexity with his life, until, when he had to write stories for publication, he got most of his ideas from his dreams. He says: "My Brownies (a new name for the unconscious mind)! God bless them! who do one half my work for me while I am fast asleep, and in all human likelihood do the rest for me as well when I am wide awake and fondly suppose I do it for myself. I had long been wanting to write a book on man's double being. For two days I went about racking my brains for a plot of any sort, and on the second night I dreamt the scene in *Dr. Jekyll and Mr. Hyde* at the window; and a scene, afterwards split in two, in which

[1] *Journal of Psychical Research Society*, vol. viii., p. 381.
[2] *Ibid.*, p. 382.

Hyde, pursued, took the powder and underwent the change in the presence of his pursuer."

"In 'Otalla, the Count,' the mother, Otalla's chamber, the meeting on the stairs, the broken window were all given me in bulk and detail, as I have tried to write them."[1]

Coleridge is said to have dreamed "Kubla Khan" after dinner during a nap, and wrote it down line by line when he awoke.

Coleridge, Abercrombie, Lord Kames.

"A distinguished lawyer had studied for days a most important case. One night his wife saw him rise up in the night, sit down, write a long paper which he put in his desk, and returned to bed. Next morning, he told his wife he had a most interesting dream; that he had delivered a clear and luminous opinion on the case, and that he would give anything to recover the train of thought which had occurred. She then directed him to the writing-desk, where he found all he had dreamt clearly and fully written out."[2]

Lord Kames says: "There are various interesting operations of which we have no consciousness, and yet that they have existed is made known by their effects. Often have I gone to bed with a confused notion of what I was studying, and have awakened in the morning complete master of the subject."[3]

We may conclude with a remarkable illustration of

[1] R. L. Stevenson, *Across the Plains*, p. 240, etc.
[2] Abercrombie, *Intellectual Power*, p. 234.
[3] Lord Kames, *History of Man*, vol. iii., p. 105.

motor action in sleep that occurred to my niece of thirteen last summer. She had been practising for days a "shake" of great difficulty in a sonata with very bad success. One night her mother who slept with her was awakened by feeling fingers on her face. She asked her daughter what she was doing. But the child was in a profound sleep, while the fingers of her right hand were incessantly practising the shake on her mother's face. Next day to the amazement of her mistress she could play it perfectly.

It will be observed that in these dream stories we have avoided, as far as possible, the more current ones, and give those that are well authenticated and directly bear upon the action of the unconscious mind in sleep, showing, we think, not only its action, but its very remarkable powers, to which are due, to a far greater extent than any of us are aware, some of the wisest utterances and writings of mankind.

It is curious that Prof. Calderwood, whom we have already quoted (p. 161) as testifying to remarkable mental activity in sleep, gets rid of any allowance of unconscious mind action by declaring that "the mind is not unconscious during these exercises. . . . Experience shows that a large amount of work can be *consciously done* in sleep!"[1] We merely quote this to show the extraordinary shifts those are driven to who resolutely deny conscious psychic action. My "mind" is conscious while "I" am unconscious!

[1] Prof. Calderwood, *Relations of Mind and Body*, p. 19. Victoria Institute, April, 1898.

CHAPTER VIII.

THE UNCONSCIOUS MIND IN THE CHILD.

In a new-born child the brain (weighing 10 to 14 ounces) is $\frac{1}{10}$th of the body weight. At the age of seven years the weight of the brain already averages 40 ounces, and at about fourteen years the brain not unfrequently reaches the weight of 48 ounces. The brain of an adult man weighs from 48 to 50 ounces. It is from $\frac{1}{30}$th to $\frac{1}{50}$th of the body weight. The average weight of the female brain is less than the male, the difference in adult life being about 5 ounces.

Physical details of young brains.

Brain substance in children is considerably more watery than in adults.

At the third month of fœtal life the fissures begin to be marked and the convolutions after the sixth month.[1]

In the new-born child the brain is comparatively smooth, the convolutions shallow, and many are wanting until the fifth week of extra-uterine life. The cells and fibres are few.[2]

"In the cerebrum of a new-born infant, whilst motor and sensory convolutions are distinct, the convolutions for the association areas, though present, are compara-

[1] See Kirke's *Physiology*, 10th edition, p. 536, etc.
[2] See W. Preyer, *Mental Development of Childhood*, p. 10.

tively simple, and do not possess as many windings as are to be seen in the brains of a chimpanzee not more than three or four years old."[1]

"Flechsig has not hesitated to ascribe to the association centres functions of the highest order. He believes them to be parts of the central cortex engaged in the manifestations of the higher intelligence, such as memory, judgment, and reflection; but in the present state of our knowledge such conclusions are, of course, quite speculative."[2]

Interdependence of mind and brain.

We have given these facts and shall proceed to give a few more respecting the condition of the brain at birth, before passing on to consider the more important part of the subject of this chapter—the condition of the mind in infancy and childhood. The more the physical and psychical are studied, the more is it seen they are correlated and interdependent; and that the development of either means the development of both. We cannot trace these relations yet in detail, but we know they exist, and that every psychic impulse leaves a physical trace and implies some molecular change.

This, then, is the reason why, in studying the mind at any age, the condition of the brain is of all importance. We proceed:—

"When a child is born, very few of the fibres of its cerebrum are myclinated,[3] and we have now an anatomical explanation of the reason why an infant has so

[1] Sir Wm. Turner, *British Medical Journal*, 21st August, 1897.
[2] *Ibid.*
[3] That is, are isolated with a protective sheath.

inactive a brain and is so helpless a creature. It will therefore be of special interest to determine whether, in those animals which are active as soon as they are born, and which can at once assume the characteristic attitude of the species, the fibres of the cerebrum are completely developed at the time of birth. Flechsig has also shown that the sensory paths myclinate before the motor tracts; that the paths of transmission of touch, and the other impulses conducted by the dorsal roots of the spinal nerves, are the first to become completely formed, whilst the fibres for auditory impulses are the last."[1]

No direct connection between the neurons.

The brain is composed of cells and nerve fibres. The brain cells in a child are largely apolar or non-branching. The fibres, stretching from cell to cell, are believed to be intercommunicating, and to be formed by repetition of the same sensations or actions or thoughts between the cells engaged in these (see chap. vi.). This forms the physiological basis of memory and of habit. The most recent researches already quoted, however (see Sir W. G. Gowers, *British Medical Journal*, November, 1897, in chap. ii.), throw a doubt upon any direct nerve fibre connection between cell and cell. The neurons (cells and their branching fibres) seem now to lie independent of each other in the neuroglia, and any currents from cell to cell must be carried by the neuroglia in the absence of actual fibres. It will be remembered, however, that in the circulation the connection between arteries and

[1] Sir Wm. Turner, *British Medical Journal*, 21st August, 1897.

veins was supposed to be through the tissues, the connecting capillaries being too small to be seen till the compound microscope appeared. In the same way, further research may yet establish the old idea that cells are united by very fine fibres, invisible with our present methods.

Fibres rapidly increase as the brain is used, until they attain their maximum in the adult brain. At all times there are still, however, large numbers of cells without any branching fibres, showing the limits of development have never yet been reached. It is possible, however, that many more will be discovered, as we have suggested, in the ground substance or neuroglia, which was once considered homogeneous, but is now proved to be a network of strands of almost infinite tenuity.

Influence of heredity.

The brain of the new-born child is the outcome of heredity, and undoubtedly bears the stamp in every part, could we but read it, of the characters imprinted by previous generations.

What we shall subsequently speak of as hereditary tendencies on their mental side are doubtless represented on their physical side by brain paths and connections, already existing from birth; so that no two brains are exactly alike, but each contains those characteristics that contribute so largely to that individuality of character the infant soon displays.

Dr. Hill of Cambridge says:—

"I am glad to find that Dr. Schofield believes in the inheritance of habit, for habit can only be explained as due to a physical change of some kind in the nerve-

tissue, and if the habit be transmissible from parent to child its transmission is due to the inheritance by the child of the alteration in the nerve-tissue acquired by its parent. We need no longer try to settle the much-discussed question of whether acquired characters are transmissible by looking out for cases in which gross anatomical changes, such as shoemaker's chest or carpenter's thumb, are inherited by children not brought up to their parent's trade, but we may assert with confidence that the central nervous system as modified by the deliberate choice of the individual tends to be transmitted to his offspring." [1]

Then, with regard to the child's own activities, we must remember that no physical sensation or action or mental operation can take place without leaving its trace more or less permanently upon the brain substance.

Mental actions produce physical pain effects.

Maudsley says: "Of no mental act can we say that it is 'writ in water'. Every impression of sense upon the brain, every current of molecular activity from one to another part of the brain, leaves behind it some after effect, which renders its reproduction an easier matter."

"Let an excitation take place in one of two nerve cells lying side by side, and between which there was not any specific difference, and there will be ever afterwards a difference between them. This physiological process is the physical basis of memory and is the foundation of

[1] Dr. Alex. Hill, *Inquiry into Formation of Habit in Man*, p. 24. Victoria Institute.

the development of all our mental functions. Not only definite ideas, but all affections of the nervous system —feelings of pleasure and pain, desires, etc.—thus leave behind them their structural effects, and lay the foundation (physically) of modes of thought, feeling and action."

"The impalpable thoughts thus leave their mark upon the brain and set up connection between the cells involved, so that the cerebrum grows to the uses it is earliest and most constantly put to."

As thoughts thus all leave physical traces behind them, it is obvious that our present consciousness at any time is of small value in determining the development and scope of the organ of mind. We read scores of books, or learn languages, and afterwards not a word of the one or of the other may have any place in consciousness. Nevertheless, the effect of each is traced upon the brain probably as deeply and permanently as in those studies we remain conscious of. Greek and mathematics may all be forgotten, but their effect in developing the brain structure remains, and the enormous importance of this fact is obvious to all.

The child's mind.

So much for the state of the brain in infancy. With regard to the mind, as Sully says, "It cannot be seen, but only divined," and Preyer confesses in infancy this is difficult. "It is hard to decipher the mysterious writing on the mind of our child."

We do not touch here on the possible active mental life of the child before birth; those who wish to read

what can be said about it should refer to Perez, *First Three Years of Childhood*, pp. 1-6.

When the child is born he is the product, mind and body, of the forces of heredity. Not only is his body, but his mind, the outcome of preceding generations of good and evil. His mind is no *tabula rasa*, but is already thickly sown with seeds, or at any rate tendencies of all kinds. For we are no longer believed, as a rule, to inherit actual vices and virtues, any more than actual diseases, but rather tendencies to each. "It was formerly thought that well-marked peculiarities, physical or mental, in the parent were handed on to the child. But this theory is now regarded as untenable, and it is held there is nothing more than a tendency to develop such qualities."[1]

The unconscious mind in infancy.

Whatever mental tendencies do exist are obviously all in the unconscious mind, for consciousness, as such, can hardly be said to have dawned in the new-born infant. Speaking broadly and without rigid limitation, it may be said that infancy is mentally the period of unconsciousness, childhood of consciousness, and puberty especially of self-consciousness, though, of course, its actual advent is earlier.

There seems to be such a thing as hereditary memory. When we come to speak of the unconscious mind and reproduction, we will give instances of maternal influences. Here is a case apparently of hereditary memory, dating from some remote source, I came across

[1] Prof. Holman, *Introduction to Education*, p. 450.

the other day—one of those instances which form the precarious foundations for the doctrine of the transmigration of souls. The eldest boy of a lady journalist, as soon as he could talk, continually kept speaking of his living in trees and eating a yellow, three-cornered fruit. His younger brother always called his father "baboo," an Indian title, which he had never heard, none of that generation of the family having been in India.

Special senses in new-born child.

As to sense development, the new-born child is entirely deaf for the first few days, and its hearing remains very defective for some time afterwards; the order of development being first the organic centres, next the lower psychic or unconscious, and last the cortical or higher conscious psychic centres.

The new-born child cannot see for days, though it has always sensation of light. Smell is developed very early in life. Preyer says "an infant can distinguish cow's milk from breast milk by the smell before it tastes it, and the mother's from the nurse's bosom by the same means the first day after birth, and distinguish many other things rightly by smell very early in life".[1]

"Taste is developed even earlier, the taste of sweetness being present at birth, glycerine on the nipple often leading the infant to suck greedily, whereas a little quinine will at once cause an appropriate facial expression"[2] as truly as consciously in an adult.

Touch is early developed. Nearly all the incipient

[1] W. Preyer, *Mental Development in Childhood*, p. 4.
[2] *Ibid.*

intellectual life and sensation seems at first concentrated in sucking and lip movement.

At this period, at any rate, we may safely say that while it is quite clear that these actions require mind for their performance, the mind is in this case wholly unconscious.

A little later on, when the child is two or three months old, we find further dawnings in unconsciousness of faculties that later on exist mainly in consciousness: the will, for example.

The growth of will in infancy.

The will can only be recognised in an infant child by its muscular movements. A new-born baby has no will. Its movements are, at first, impulses, then reflexes and then instincts and imitations. These last are the beginning of will, and though first unconscious, soon become conscious and voluntary.

Professor Tracy remarks: "Perez says 'the will is born, little by little, from reflex impulses and instinctive movements which . . . become conscious and voluntary'. Will, in its negative form, he holds to be also a matter at first of mechanism, voluntary and unconscious. Wundt, on the contrary, holds that there is no such thing as purely reflex and involuntary consciousness." [1]

But there is really no contradiction in Dr. Wundt's remark. Wundt says there is no involuntary consciousness, but Perez only speaks of involuntary *unconsciousness*, which there is. Of course, involuntary will would be in itself a contradiction. When the uncon-

[1] F. Tracy, *Psychology of Childhood*, 3rd ed., pp. xix., 89, 90.

scious will acts it is not that it acts involuntarily, but without *conscious* volition—a very different thing, if we admit unconscious volition.

The object of Professor Tracy's work, he says, is to study what is the nature of the process by which the automatic and mechanical passes over into the conscious and the voluntary.

He knows nothing but the mechanical on the one hand and the conscious on the other, wholly ignoring the vast field of the unconscious mind, and those phenomena which, though not mechanical, are still not in consciousness. Here is seen the reason why he imagines Wundt and Perez to be in opposition, which they are not.

"We find in the child a development of consciousness keeping pace with the development of the physical organism." [1]

After three months a child can distinguish a friendly from a severe look, and act accordingly.

It is said that when a child persistently holds its head erect at about three months, it has begun to think.

Mental development up to ten months.

The following observations, by a father and mother, of their own child, will give a general idea of the development of the various mental faculties, mainly in unconsciousness, from birth to the time when the record was written, when the child was between twelve and fourteen months old.

Some of these mental phenomena are undoubtedly phenomena in consciousness, but most are not. We do

[1] Prof. Baldwin, *Mental Development of Childhood*, p. 8.

not attempt in a record like this to distinguish which are which, though the two classes are quite apparent.

"*Sight.*—He has now (at about one year) reached the stage in which he looks intently at the objects which he has thrown down, observing no doubt the effects of the law of gravity; finds great pleasure in throwing a ball about the room, and then, crawling after it, throws it fairly well towards another person, sees well through the window, first recognising his father through the dining-room window at eleven and a half months old. He appreciates colour, his attention being at once drawn by the sight of bright flowers. How far he distinguishes colours we cannot say. When ten months old he would smile constantly at the sight of a turquoise blue vase, but at no other, and at thirteen months would point to the blue side of a cube when asked to do so. Special senses.

"*Hearing.*—He turns to the clock when it strikes and looks towards the window when vehicles pass. He still delights in making any kind of noise with his hands on the piano or with the poker on the floor. Two months ago he would enjoy a song, and the first sound of 'Sur le pont d'Avignon' would set him off dancing when held up by the arms. This lasted about a month, but music seems to give him no pleasure whatever now.

"*Touch.*—He wants to touch everything first carefully with his first finger, then taking hold and sticking, lastly throwing to the ground; has always preferred hard things to soft, and smooth to rough.

"*Taste.*—At six weeks he had his first dose of castor oil, and wanted more. At five and a half refused bottle because not sweet enough. At eight and a half months, after two or three doses, liked cod-liver oil and iron. He still likes soap and not jam, but he clearly sees the superiority of cake to bread, and his feelings on the subject are plainly expressed on the countenance, as well as by impatient movements and sounds.

"*Smell.*—He has given up putting flowers into his mouth, except for the fun of having them pulled out. He begins to sniff and screw up his nose at the sight of them, seems to enjoy smelling them and holding them out to others to smell.

"*Fear.*—At two months and three days he threw up his hands with a cry at the sound of a loud thunderclap, but this did not prevent him from going on with his bottle; has often been startled by something new, *e.g.*, by his father sneezing when barely twelve months, by the sight of a cat at eleven months. At eight and a half months he was terrified and cried loudly at the sight of a boy two and a half years old who came to stay in the house, especially when he moved about, and after three days he would continue to keep his eyes fixed upon him with a look of apprehension. In the last few days he has shown slight alarm at a black bag, more at a mechanical ostrich moving along the floor, and in crawling along the drawing-room carpet he is afraid to approach a leopard's skin. Cases like these, which we believe are

Emotional nature.

common enough in young children, must be taken, as Preyer says, as showing an hereditary fear.

"*Anger.*—This is not mentioned by Preyer, but Darwin saw distinct signs of it in his boy before four months old. We have not seen many traces of it yet in our own. He has shown signs of impatience, he has cried at waking up and seeing his mother instead of his nurse, and he has turned his head away from her with a look of aversion, after having been made to do something which he disliked.

"*Grasping Objects.*—Putting out the hands for this purpose is an action very gradually developed. At seven and a half months he did it with confidence; at ten and a half he would use both hands, and show great delight in holding two things in one hand. He now no longer stretches out his hands towards distant objects, but only towards such as may be brought to him. At ten and a half months he took great pains, and at last succeeded, in picking up small crumbs. He is generally most pleased, not with toys, but with things of unmanageable size, such as the fire-irons or his own chair. He will look very grave and intent while he examines them.

Purposive actions.

"*Learning to Sit and Stand.*—At seventeen days he first lifted his head and turned himself from side to back. At five months seventeen days he partly lifted himself into a sitting posture, and on being supported with a pillow was much pleased. He cannot walk yet, and was only ten days less than a year old when he began to crawl.

"*Imitative Movements.*—Pat-a-cake. He did not attempt to imitate this until eleven months old, and then with the palm of the left hand on the back of the right. At twelve months three days he put the two palms together. Before eight months he much appreciated a game of bo-peep, surprise being, as Darwin points out, the chief cause of the amusement; and at twelve months he would try to play at it by imitation, holding up a fan, and looking roguishly under it, but never quite hiding his face.

"*Imitation of Sounds.*—At just thirteen months he imitated his grandmother coughing, and much enjoyed repeating it when asked, 'How did grandmamma cough?'

"*Expressive Movements.*—His first tear was noted at the age of forty-eight days, his first smile at seventy-five. The tear was wrung out of him by the agonies of being photographed, and it was long before another was seen. As Preyer says, the date of the first smile varies much, according to what we understand by the word. At 120 days he clearly recognised his nurse when she came into the room, and smiled at her while still taking his bottle. Affection he expresses by gently laying his hand upon the face; wilfulness by straightening of the limbs. By means of gestures, with the help of sounds, of which more presently, he makes one understand everything he really wants, putting out his hands towards the desired object or the person that he wishes to take him up. On obtaining what he wants, he will

Expression of emotions and wishes.

shake with delight from top to toe, but does not utter a shrill scream, as he did a month ago. When the upstairs bell rings he knows that it is for him to be brought downstairs, stops even if taking his bottle, refuses to go on, and makes scolding noises if he is not brought down at once. Two days ago he placed his hand on a hot-water can, but quickly drew it back. The next day he put his hand towards the can with a peculiar movement and sound, but without trying to touch it. These are signs of memory and to some extent of reasoning. There are but three clear vowel sounds which he makes, and these may be represented in English by ah, oo, e, as in er. The consonants are also few, b, d, m, t (boo at nine and a half months, but soon dropped it). As yet there are only two sounds which seem to express a definite idea.

"*Feeling of Self.*—This is difficult, as yet, to trace. He examines his legs with a certain look of wonder, but he does not bite his own hand nor hold out a biscuit and offer it to his foot, like the child nearly two years old described by Preyer.

"*Moral Sense.*—Preyer says nothing of this, but Darwin noticed the first sign at the age of nearly thirteen months, when the words, 'Doddy won't give poor papa a kiss—naughty Doddy,' made the child feel slightly uncomfortable. Our nurse thought once that she saw a guilty look in the baby's face when he had done something wrong, but we can hardly say that the moral sense shows itself yet. He seems to be only amused when told not to do anything,

Moral sense.

and will at once do it again, not with an air of wilful disobedience, but as a new kind of game."[1]

With one or two further remarks, we may close this brief account of the child's early psychic condition.

A new-born child has not character, but disposition. Character is the result of innumerable unconscious mental impulses, the result of, mainly, unconscious education; but disposition and individuality are already its possession from heredity.

Mind in early childhood.

"Later on in life (about two years) various faculties come to the front. Children learn discrimination and can distinguish characters at this age—quick to obey one, slow to obey another. They behave differently with the nurse and with the father."[2] "Imagination is strongly developed in children. The essence of children's play is the acting of a part and the realising of a new situation. It is thus akin to dramatic action, only of an unconscious nature."[3]

"At this age, too, we get fear, surprise, jealousy, anger, affection, play, sympathy, emulation, pride, resentment, grief, hatred, revenge, shame, remorse and a sense of the ludicrous, all coming into consciousness. From two to three years the child possesses generally receptual intelligence only, not yet having the power of forming concepts. At the average age of three years individual self-consciousness begins."[4]

[1] "Memoirs of a Child," *Parents' Review*, vol. ii., p. 535, etc.
[2] Prof. Baldwin, *Mental Development of Childhood*, p. 125.
[3] J. Sully, *Studies of Childhood*, p. 38.
[4] Sir D. R. N. Buckle, President, Sect. Psychol., Brit. Med. Assoc., 1897, in *British Medical Journal*, 11th September, 1897.

Childhood is very happy, and when closely observed, and especially in connection with its powers of imagination, its happiness is clearly seen to be derived from psychical sources in the unconscious mind, rather than from physical sensations.

But above all else, two faculties are seen in every child, with but rare exceptions, and they seem to be the foundations of the subsequent emotions and reason.

Love and sense of justice.

They are love and sense of justice. All children "love"; this is the oldest and deepest of all emotions; all children have an instinctive sense of justice and right; the source of both very deep down in the unconscious mind.

And here we may well pause one moment in amazement at this reflection of the Creator. Wordsworth's oft-quoted lines on the Divine origin of children, like so many of his utterances, are not mere poetry but contain profound truth. God is Love and its source; God is Light and the source of all righteousness and justice. And the little child reproduces in its unconscious infant mind these two great principles from which all good comes—the fulfilling of the whole law. After all, when Professor Sully traces the source of our unconscious mind to some "One," he has, at any rate as regards these two great and distinguishing qualities that make infancy so ineffably lovely, uttered a profound truth. When in a former chapter we objected to his statement, it was because he ignored the unconscious mind, not because he acknowledged God.

We find then the fact that in the child the unconscious mind (of whose education we have to speak) represents at first all the mind the child has: and that he has clear mental qualities from birth if not before, and that these are all unconsciously exercised at first, is hardly seriously disputed.

The special qualities that reside in the child's unconscious mind (many even after consciousness has dawned) are first, all the tendencies and forces of heredity, that which constitutes the child's nature, disposition, individuality. Next memory, the elements of will, certain emotions, notably love and happiness; certain intellectual qualities (wholly unconscious), such as love of justice. With the dawnings of consciousness we get the moral sense, the formation of speech, and the first exercises of all the special senses and habits. These, and doubtless other foundations and essentials of life and character, are the contents of the unconscious mind at this period, and most of them are susceptible of development and modified by education.

CHAPTER IX.

GENERAL PRINCIPLES OF UNCONSCIOUS EDUCATION.

In this chapter we approach a veritable *terra incognita*. Those who have ventured so far in company with us may have felt at various stages rather uncertain of the ground beneath their feet, owing to the little known nature of the district travelled; but here we reach a land as yet unexplored, and yet one that is as full of undiscovered gold as the north-west of America appears now (1898) to be. Without necessarily committing themselves to the double heresy which forms the heading of this chapter, most advanced educationalists, amongst whom we include Herbert Spencer, Herbart, Pestalozzi, Fröbel, J. P. Richter, Preyer, C. Mason, and many others, clearly recognise that the best and most efficacious form of child training is that which is addressed to unconsciousness rather than to consciousness; in short, each and all admit, though most probably some would shrink from the words, that there are unconscious psychic powers and that these can be educated; and not only so, but that it is on their proper education, rather than on that addressed to consciousness, that the most important part of the character of the individual depends. Dr. Carpenter, for example, says:—

Importance of unconscious education.

"There are two sorts of influence: that which is active and voluntary and which we exert purposively; and that which is unconscious and flows from us unaware to ourselves. The influence we exert unconsciously will hardly ever disagree with our real character."[1]

Ordinary conscious education.

Of course education in the ordinary sense knows nothing of this. "For a long time the error prevailed that for the child's first learning there was absolute necessity of a teacher, as if only complete thought could be impressed on the child's brain, and that only by this means the mind would finally be developed in the right manner. *Herein lies a gross fallacy.*"[2] The fallacy is, in fact, that only the conscious mind is susceptible of education.

What is generally understood by early education and child training, is the guidance of the child consciously, by rules and commands and precepts (a fresh one may be each day) enforced by smacks and slaps and other penal measures many times a day, coupled with direct instruction in A, B, C, 1, 2, 3, and other forerunners of intellectual culture.

Herbert Spencer forcibly describes the prevailing ignorance and what ordinarily passes as parental education. "While it is seen that to gain a livelihood an elaborate preparation is needed, it appears to be thought that for the bringing up of children no preparation whatever is needed. Not an hour is spent by either a

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 542.
[2] Preyer, *Mental Development of Childhood*, p. 66.

boy or girl in preparation for that gravest of all responsibilities—the management of a family. No rational plea can be put forward for leaving the act of education out of the curriculum. The subject which involves all other subjects, and that in which education should culminate, is the theory and practice of education. The management of children is lamentably bad. In most cases the treatment adopted on every occasion is that which the impulse of the moment prompts, and varies from hour to hour as the feelings vary." [1]

"Commenting on the chaotic state of practice relative to self-government, Richter writes: 'If the secret actions of a large class of ordinary fathers were brought to light, they would run somewhat after this fashion. In the first hour pure morality must be read to the child; in the second, mixed morality, or that which may be applied to one's own advantage; in the ninth, 'Do not make a noise, dear child'; in the tenth, 'A boy must not sit so quiet'; in the twelfth, 'You must educate yourself'. So by hourly changes the father conceals the untenableness of his principles." [2]

Conscious education has been varied in every conceivable way. There have been reading with tears and reading without tears; nursery rule, drawing-room rule, schoolroom rule, but every fad and every variety has followed the same mistaken principle, namely, all education, all training worthy of the name, must address itself to the child's consciousness, *i.e.*, the conscious mind. And this is the tap-root error of every such system.

[1] Herbert Spencer, *Education*, pp. 95, 96. [2] *Ibid.*

Unconscious education goes on naturally.

Here the practical man intervenes with the pertinent question: "If this generally-adopted system is so bad, so vicious and so pernicious, how is it we get as its result good children, good men and good women with well-developed and well-balanced minds?"

At first sight this question seems conclusive in favour of the value and sufficiency for all practical purposes of conscious education.

But the true answer is that, whether the parent likes it or not, whether the parent knows it or not, whether the parent helps it, hinders it, or ignores it, the education of the unconscious is ever going on; aye, and going on faster far than that of the conscious, and whatever the child subsequently turns out to be will be far rather due to *this* than to all the direct efforts made by the parent.

All around the child lie countless forces, unnoticed and unknown by the parent, while within the child lies a vast receptive capacity, unknown to the parent, and still largely ignored by those psychologists who should be his teachers—the unconscious mind; and it is to the action of these unnoticed forces upon the ignored mind that the child's real early education and character are mainly due. And this proceeds through life, and, indeed, is dimly perceived sooner or later by parents. Take, for instance, the value of a public school education. Does not every parent who has a son at Eton or Harrow well know that the greatest value to the boy is the unconscious education he receives and not the lessons addressed to his conscious mind?

Here is the reason, then, why an untrained child, that is one whose conscious training has been neglected, grows up often so well. This has been a standing puzzle for ages. One parent adopts all the paraphernalia placed at her disposal for the artificial fashioning of her child's mind, the other lets the child run absolutely wild, and the result is often to make the former doubt the wisdom of her methods.

Reason why untrained children often turn out well.

Now the secret is that, through good luck it may be rather than good care, the "wild" child has been cast amongst unnoticed forces, beneficial to its character, that have trained its unconscious mind and produced the better result of the two.

And this brings us to a further point in the education of the unconscious mind. It is *nature's education*—natural and therefore Divine, instead of artificial and thus human. This education is no invention of ours. All that is done here is to point out its existence and its importance, and indicate the methods by which the education may be guided into good and wise channels, instead of bad; always remembering that, for good or ill, this education steadily proceeds all our lives, though pre-eminently in childhood.

"The soul (unconsciously) observes and reflects and assimilates the countless products of nature and art which enter it. The result is formation of character, and all which we call life is impressed. The influences from without make a man what he is."[1]

[1] Dr. J. Pollock, *Book of Health*, p. 525.

"We are momentarily under the influence of outward events, which are registered within, and become, as it were, part of ourselves; being, indeed, factors in most of our feelings and motives." [1]

"The least valuable part of education is that which we owe to the schoolmaster (conscious), the most precious lessons are those which we learn out of school (unconscious)." [2]

Let us not, however, think from this that direct teaching, instruction and precept, too, have not their right and proper place, but it is indeed a far lower and humbler one than that generally imagined and far indeed from occupying the exclusive place it has been given.

Here we must turn aside for a moment to explain what must already be felt to be a difficulty, if not indeed a fallacy, that vitiates the whole argument of these pages.

Unconscious education and education of the unconscious, the same.

The difficulty is that we speak, indifferently, of the conscious education of mind and the education of the conscious mind; of the unconscious education of mind and of the education of the unconscious mind; of the education of the conscious, and of conscious education; of the education of the unconscious, and of unconscious education.

Are these not essentially different thoughts? And, if so, are not the arguments and subjects extremely confused? Nay, more—is not most of the evidence prob-

[1] Dr. J. Pollock, *Book of Health*, p. 524.
[2] Sir J. C. Browne, *Book of Health*, p. 345.

ably in favour of the unconscious education of mind, rather than in favour of the education of the unconscious mind? To write about the one when the subject of the chapter is the other, would thus be a serious fallacy.

But they are in essence the same.

The unconscious education of the mind does not mean that education itself is an entity which can be conscious or unconscious; but that the education is conveyed to the mind consciously or the reverse. The mind, therefore, with reference to the education imparted, is in a state of unconsciousness; in fact, with reference to education at the time, it is unconscious mind: therefore, the unconscious education of the mind means, at any rate, the education of the unconscious mind. But it may mean more and rise subsequently to consciousness, as we shall show.

Three varieties of education.

Three varieties of education are possible with regard to consciousness and unconsciousness. First, there is the ordinary education; the conscious instruction of the conscious; as, for example, in being taught the French language by a master and books. Secondly, there is the unconscious education of the conscious; or, in other words, the education of the conscious through the unconscious. In this it is the unconscious mind that is primarily reached, but the education does not stop there, but is passed on by the unconscious into consciousness; as, for example, when French is imbibed from residence in France, without conscious effort or definite instruction, or as the French language is learnt by French children.

The knowledge reaches consciousness, and the child in each case knows well it can speak French, only the process of education has been addressed in this case to the unconscious mind. Then, lastly, there is the education of the unconscious mind that does not pass on or rise into consciousness, but, as a rule, terminates there, such as, for instance, all those traits and characteristics that distinguish a child brought up in France from one brought up in England. Under this head, too, come motives, character, conscience, principles, intuitions, all of which have their home in unconsciousness.

On some of these we can, indeed, turn the bull's eye of consciousness with an effort, but their *sphere* is in the unconscious, and the bringing up of them frequently into consciousness by careful introspection, often leads to mental hypochondriasis ; just as bringing the unconscious organic functions and actions into notice leads to physical hypochondriasis and hysteria. It is well to recognise there are two spheres or divisions of mind, which to a certain extent can be made to overlap, but which nevertheless have their distinctive properties and value : the springs, the foundations, roots and principles of life, which lie rather in the Unconscious ; the flowers and fruits and actions which lie in the Conscious.

Now in thus writing on education, we must therefore first distinguish broadly between conscious and unconscious education ; and secondly, we can subdivide the latter—unconscious education—as we have seen, into that which eventually rises into consciousness in its

results though not in the process, and that where both results and process are sub-conscious. We fully justify, however, the right to apply the term "education of the unconscious mind" to both these latter, and, therefore, to all education received unconsciously, whatever its ultimate fruits may be, and with this explanation shall continue to use all references and quotations referring to such training, as examples of the "education of the unconscious mind"; specially emphasising, however, those particular processes which do not go further, but expend their whole force on developing this all-important part of our mental life.

The net result, therefore, of what we have already stated is this. That the conscious education and training by which the greatest store is generally set, is not after all the training that is most determining the child's future; this is rather decided by the training and educating of the child's unconscious mind for good or evil that is going on at the same time entirely outside the parents' cognisance.

Now it is to this that we wish to direct the especial attention of our readers, in order that they may understand what we mean by the phrase "the education of the unconscious mind".

Object of the education of the unconscious.

It is surely all-important, if our children are surrounded with these unnoticed powers, that we should know something of them, and of the laws by which they act, and of the power we may have to direct them for good, and not for evil, in their unseen workings on our child's nature.

The object of this education is character rather than learning. Direct instruction, or book learning as it is called, must be addressed to consciousness; character in formative education is best carried out through the unconscious. As to character, "Children," Herbart says, "have very marked individuality without possessing character. Children are wanting in that which, above all, goes to make up character—that is, will. Willing, determination, take place in consciousness; individuality, on the other hand, is unconscious." [1]

"In those early impressions, of which no one seems to be conscious, least of all the child, and which gather up power as the rolling avalanche, the elements are collected for future emotions, moods, etc., that make up a greater part of the history of the individual." [2]

"The strong individual struggles out of individuality into character, the weak lets himself slide out of the domain of the conscious to the unconscious." [3]

The fruit, of course, of the education of the unconscious in us is only seen by ourselves by results in consciousness. Others, however, can see results of which we may be wholly unconscious.

Value of happiness in child-life.

One great point in favour of this unconscious education is, that it does not interfere with the happiness of child-life, but increases it; and this is no small matter. A house without sunshine lowers the whole physical health, and a home

[1] J. F. Herbart, *Science of Education*, 2nd edition, pp. 116, 117.
[2] Dr. L. Waldstein, *The Sub-conscious Self*, p. 47.
[3] J. F. Herbart, *Science of Education*, 2nd edition, pp. 116, 117.

without happiness lowers the whole psychical health. The awful effects of a miserable infancy and unhappy childhood are seen afterwards in the adult, who is like a plant which has been reared without sunshine. Happiness in the family is a *sine quâ non* for a mentally healthy child.

We do not require to create happiness in children, but only to see that we do not destroy it. The happiness of a child, in the first instance, is spontaneous, and is drawn largely from within (its own imagination), afterwards from without. In childhood, the pains it suffers are mainly physical, few mental, while its pleasures are both physical and largely psychical; therefore, there is a far greater proportion of pleasure than pain in young as compared with adult life, where psychic pain forms the greater part. The balance of increasing pain seems to turn after puberty, when the child gets sadder and more thoughtful.

"Due care being taken to elicit the benevolent sensibilities, it is the happiest children who will be the most sympathetic and unselfish."[1]

"How common it is to meet with irritable minds that spring up in opposition to any calm statement of facts, with a sort of instinctive resentment. Such a state of mind may often be traced to circumstances of early life that called forth the principle of self-defence, long before reason had been developed."[2] (In short, an unhappy childhood.)

Bearing, then, in considering our subject, these two

[1] Isaac Taylor, *Home Education*, p. 39. [2] *Ibid.*, p. 42.

great points in mind—that the object is the foundation of character, and that the means must in no way interfere with that happiness which is the moral health of the child—let us see what general principle of unconscious mind education we can grasp from the teaching of Herbert Spencer.

Herbert Spencer on unconscious education.

Speaking of the value of unconscious education from surroundings, as compared with book instruction, he says:—

"Not perceiving the enormous value of that spontaneous education which goes on in early years, but perceiving that a child's restless observation, instead of being ignored or checked, should be diligently ministered to, and made as accurate and complete as possible, parents insist on occupying its eyes and thoughts with things that are for the time being incomprehensible and repugnant. They do not see that only when his acquaintance with the objects and processes of the household, the streets and the fields is becoming totally exhausted, only then shall a child be introduced to new sources of information which books supply."[1]

"In education the process of self-development should be encouraged to the uttermost. Children should be led to make their own investigations and to draw their own inferences. They should be told as little as possible, and induced to discover as much as possible. The all-important knowledge of surrounding objects, which a child gets in its early years, is got without help; the child is self-

Process of natural education of the unconscious.

[1] Herbert Spencer, *Education*, p. 26.

taught in the use of its mother tongue. . . . Watch the ceaseless observation and inquiring and inference going on in the child's mind. We may safely follow the discipline of nature throughout—may, by a skilful ministration, make the mind as self-developing in its latter stages as it is in its earlier ones, and only by doing this can we produce the highest power and activity." [1]

Any one reading the above condensed passage will see that the self-education which H. Spencer here commends is largely, and in its earlier stages, acquired wholly unconsciously.

"That all-important part of education which goes to secure direct self-preservation, Nature takes into her own hands. While yet in its nurse's arms, the infant, by hiding its face at the sight of a stranger, shows the dawning instinct to attain safety, which later on is further developed. How to balance its body, how to control its movements so as to avoid collisions, what objects are hard and will hurt if struck, what objects are heavy and injure if they fall on the limbs, which things will bear the weight of the body and which not; these and various other pieces of information needful for the avoidance of death or accident, it is ever learning (and we may add unconsciously). What we are chiefly called upon to see is that there shall be free scope for gaining this experience and receiving this discipline, that there shall be no thwarting of nature." [2]

[1] Herbert Spencer, *Education*, pp. 69, 70.

[2] *Ibid.*, p. 12.

Must begin from the cradle.

"It was the opinion of Pestalozzi, and one which ever since his day has been gaining ground, that education of some kind should begin from the cradle. Whoever has watched with any discernment the wide-eyed gaze of the infant at surrounding objects, knows very well that education *does* begin thus early, whether we intend it or not. This activity of the faculties from the very first, being spontaneous and inevitable, the question is whether we shall supply in due variety the material on which they may exercise themselves. . . . The earliest impressions which the mind (unconscious) can assimilate are the undecomposable sensations produced by resistance, light, sound, etc. Following, therefore, the necessary law of progression from the simple to the complex, we should provide for the infant a sufficiency of objects, presenting different kinds of resistance, of objects reflecting different qualities of light and of sounds, contrasted in their loudness and pitch. Every faculty during that spontaneous activity that accompanies its evolution is capable of receiving more vivid impressions than at any other period. Both the temper and health will be improved by the continual gratification resulting from a due supply of these impressions which every child so greedily assimilates." [1] Here is an admirable description of a phase of unconscious education but little known.

[1] Herbert Spencer, *Education*, pp. 72, 73. And yet an intelligent modern writer (Mrs. Earle, in *Pot-Pourri from a Sussex Garden*) considers it matters little what a child's education or surroundings are before twelve or fourteen, as they have no real bearing on its after life.

Now let us see the results of a perverted or bad education of the unconscious, from the same author. "What kind of moral culture is to be expected from a mother who shakes her infant because it will not suck? How much sense of justice is likely to be instilled by a father who, hearing his child scream because its finger is jammed between the window sash and the sill, begins to beat it?"

Bad unconscious education.

"Who has not seen a child repeatedly slapped by nurse or parent for a fretfulness arising from bodily derangement? Are not the constant and often quite needless thwartings that the young experience, the injunction to sit still, which an active child cannot obey without suffering great nervous irritation, the command not to look out of the window when travelling, etc., signs of a terrible lack of sympathy?"[1]

There are few of our readers but could extend these instances almost indefinitely, but enough have been given to show what is meant by the bad education of the unconscious mind. Here the education is given to the child probably unconsciously by the parent, and certainly the evil is absorbed unconsciously by the child; and when, in later years, it turns out a tyrant or a bully, there are few who will see that the source of this developed character is this early mal-education of the unconscious mind. And yet so it is.

Is there then to be no discipline in education? Certainly there is; but not where not needed, and not

[1] Herbert Spencer, *Education*, p. 98.

capricious and arbitrary in its character. What it should be we will speak of further on.

Threefold method of unconscious education.

Having thus surveyed the ground generally, let us consider what are the true methods of unconscious education. Matthew Arnold himself perhaps hardly knew when he framed the sentence, "Education is an atmosphere, a discipline, a life," how much it contained. To us its essential value is that it points out the true methods and principles of the education of the unconscious mind. An "atmosphere" and a "life" are, at any rate, forces that act unconsciously, and, as we shall point out, "discipline" does the same; indeed it is automatic in its action.

We have, as we have seen, to educate the infant, to form its character, to mould its disposition, to develop its brain, and instruct its senses, until the results emerge into full consciousness; the infant's mind and brain being already filled with hereditary tendencies and paths.

"The enormous practical importance of directing the pre-conscious activity through the physical nature, may be admitted and systematically acted on; especially in that very earliest stage of infant education, which lays the foundation and moral habits of conscious life." [1]

Heredity and its forces.

"Darwin considered the influence of education as compared with that of heredity as infinitesimal." [2]

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 353.
[2] W. Preyer, *Mental Education of Childhood*, p. 164.

[But we must remember a great deal passes as heredity which is derived rather from the company of the parents in early life, than from being descended from them.

"What is often called heredity is simply the expression of a sub-conscious self, the beginning of which can be traced to early childhood, when the actions of the parents and their example are sub-consciously perceived, and, by their constant repetition, form fundamental impressions."[1]

For instance, "A young boy had an invincible dislike to music (naturally put down to heredity), and couldn't be prevailed upon to continue his piano lessons. I was impressed by the violence of his aversion, and, upon inquiry, was told he was born and passed his infancy next to a 'conservatoire' of music. No doubt he had been constantly disturbed in his sleep by the discordance of sounds."[2]]

Herbert Spencer, on the other hand, and far more truly, regarded education as almost all-powerful; but then when he said, "A man resembles far more the company he keeps than that from which he descended," he was bringing in the forces of unconscious education, whereas Darwin speaks, I think, only of conscious education.

Herbert Spencer on heredity.

It is true that the latter, consisting of direct precepts, etc., is not so powerful as the forces of heredity. When we consider that these have their home in the unconscious mind, it is obvious that an education that will

[1] Dr. L. Waldstein, *The Sub-conscious Self*, p. 19. [2] *Ibid.*, p. 54.

drive them out or overcome them, must be addressed to unconsciousness.

Even when we consider that the physical structure of the brain is laid down according to inherited tendencies, we still say education is stronger; for we well know the education of the unconscious mind we advocate is all-powerful to change and modify this very structure in the direction wished for.

Power of the unconscious mind over the body.

Curiously enough, Sir Michael Foster, with a poesy that is somewhat out of place in dealing with physiology, in his address to the British Medical Association, attributes all these mental powers to physiology herself, that here obviously stands for "the unconscious mind". "When physiology is dealing with those parts of the body which we call muscular, vascular, glandular tissues, and the like, rightly handled *she* [*sic*] points out the way, not only to mend that which is hurt, to repair the damages of bad usage and disease, but so to train the growing tissues and to guide the grown ones as that the best use may be made of them for the purposes of life. She not only heals; she governs and educates."[1] Surely the poetic spirit could not idealise a science further—with the effect, however, for those who do not turn it into prose, that the real agent, the unconscious mind, is unrecognised.

"Nor," he continues, "does she do otherwise when she comes to deal with the nervous tissues. Nay, it is the very prerogative of these nervous tissues that their

[1] Sir Michael Foster, *British Medical Journal*, 21st August, 1897.

life is, above that of all the other tissues, contingent on the environment and susceptibility of education."

To return to Arnold. "Education is an atmosphere" —what the mind breathes. The air that we breathe is the medium that surrounds us; the atmosphere our spirits breathe is the medium that surrounds them; in short, it is our environment.

"The surroundings of a man are those influences, material or immaterial, which *form the atmosphere* in which he lives, which give colour to his daily life, and, often themselves unseen, are present with him for good or evil throughout the whole term of his existence. They affect and alter his nature and his happiness." [1]

Education by atmosphere.

A little child is fluid, plastic, receptive. There are two ways of imprinting upon him the shape and outlines you desire as the result of your education: the one a conscious and perceptual, the other unconscious and atmospheric. If I wish to cast a bronze statue, I do not trouble about the bronze; all my care is about the mould. Every line, every curve I wish to see on the statue must be traced *there*, and it is on the perfection of the mould that the beauty of the statue depends. I pour in the liquid bronze. The mould is its environment. Left in there long enough it fills every curve, every line, and reproduces all its features. I break the mould and there is the statue, the outcome of its surroundings. Again, I wish to mould the child. Education is an *atmosphere*, an environment —that is, an education of the unconscious mind. This

[1] Dr. J. Pollock, *Book of Health*, pp. 519, 520.

then is my first great educational force, and this shall overcome the lines of hereditary evil or defect. I spend all my time in perfecting my mould—in other words, in seeing that the child's surroundings are exactly what I wish the child to become. Then I pour the child in and let him remain a sufficient time until this environment has saturated his unconscious mind and moulded it into its likeness. The child knows nothing of the process. It does not interfere with its happiness, but increases it; and, best of all, the result is sure. A child cannot fail to bear the stamp of the atmosphere its mind has unconsciously breathed the first few years of its life, and it is this and nothing less that is the real foundation of its character. What a power, what an unknown force is here.

"Life and health are largely acted on (unconsciously) by agents immaterial or psychical. The lives and well-being of natures and individuals owe their colouring to these. They belong to and form part of civilisation. They are essential parts of the education from which springs the character." [1]

"The schoolmaster, it might with some justice be said, only gives the finishing touches to a process commenced at the moment of birth, if not much earlier. Vast stores of knowledge indispensable and of paramount importance are picked up spontaneously (unconsciously) in babyhood." [2]

"Educational experience proves that nothing exerts

[1] Dr. J. Pollock, *Book of Health*, p. 520.
[2] Sir J. C. Browne, *Book of Health*, p. 345.

so great an influence on the psychical organism as the moral atmosphere which is breathed by it. The composition of that atmosphere is of fundamental importance." [1]

But observe, if we had only conscious minds, this force would be useless; there would be nothing to act on in us, for it can only work on unconscious material. The thought, the emotions, and the will are all formed largely thus, for the will itself can be unconscious as well as conscious. We read of "automatic, passive, instructive, and imitative willing".[2]

Education by discipline.

Again, "education is a discipline". An engine differs from a horse in that it is subject to discipline. It can only run on its rails, it cannot wander like a horse, at will. The laying down of the railroad is the discipline which determines the path the engine must travel. Habit is the railroad of character. "Habit is as strong as ten natures," and nature means heredity. Here again, therefore, we have another power in education to overcome inherited evil. If environment is the mould in which the mind may be cast, habit is the track along which it has to travel. Sow an act, reap a habit; sow a habit, reap a character; sow a character, reap a destiny.

Observe again, habit is unconscious education. You say "Do this or that," and you address consciousness; with the usual result that, when your back is turned,

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 353.
[2] Prof. Holman, *Education*, pp. 79, 80.

the thing is not done, and there is continual friction and punishment. You form the habit in the unconscious mind of doing this or that, and lo and behold, you have laid down a track along which the mind finds it easier and smoother to move than in any other direction; you have provided a physiological basis for the psychic action; henceforth all is easy.

Habit, therefore, is the second great force that acts on and educates the unconscious mind.

Education by example.

The third and last is "education is a life". We do not know exactly what Matthew Arnold originally meant by this. Probably that education was a vital force. We take it here in another way. Just as the "atmosphere" is the environment or mould, as "discipline" is the habit or railroad, so the "life" is the inspiration or ideal before the child.

The atmosphere moulds the mind, the discipline directs its course, and the life before it is its goal and ideal. By the life we mean the parent's life, not the child's. It is the parent that is the child's unconscious (sometimes conscious) ideal, the child's inspirer and model. "The unconscious action of example shapes those feelings which give the tone to the character."[1]

We have, therefore, in the education of the unconscious, to consider these three things: the moulding or forming of the mind by environment, the action of the mind as disciplined by habit, and, lastly, looking on the

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 353.

mind as a living entity, the goal or ideal *before* it rather than *around* it, towards which it ever strives.

The following are among the results of such education, as given by C. Mason :—

Definite ideas upon particular subjects, as, for example, the child's relations with other people. Habits of neatness, of disorder, of punctuality, of moderation ; general modes of thought, as affected by altruism or egoism.

Modes of feeling and action.

Objects of thought—the small affairs of daily life, the material world, the operations or the productions of the human mind.

Distinguishing talent—music, eloquence, invention.

Disposition or tone of character, as it shows itself in and affects his family and other close relations in life—reserved or frank, morose or genial, melancholy or cheerful, cowardly or brave.[1]

We will now proceed to discuss these three factors in the education of the unconscious mind, in the next chapter.

[1] C. Mason, *Parents and Children*, p. 28.

CHAPTER X.

THE UNCONSCIOUS MIND AND ITS DETAILED EDUCATION.

PLATO says: "The impressions which man receives in childhood are the most important, as they are more easily impressed and retained best. What is practised from youth up gradually forms part of the character."

"It is wonderful how powerfully what may be called the current of daily life carries along with it, without any consciousness of its influence, those who are subject to it."[1]

"We may regard every activity in the universe as exercising a sub-conscious influence upon us."[2]

We will proceed to consider those activities that immediately surround and influence the child.

Ante-natal influences.

Before birth the child is largely influenced by the qualities of its surroundings. The characters of the mother and of the father too somehow have power to impress the embryonic brain. A child of a drunken father has certain special mental characteristics; and of course, beside and beyond these, there are all the forces of a more remote heredity, of which

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 358.
[2] Prof. Holman, *Education*, p. 71.

the father and the mother themselves are the expression. The physical health and strength of the mother has much to say to the child at this time. Nay more, readers of C. Kingsley's *Life* will well remember, as we quote in a subsequent chapter, how his mother, before his birth, travelled in Devonshire, in the hope that maternal impressions might favourably act upon him; and apparently not without effect.

All this is more or less nebulous, however true. We will therefore proceed to consider the environment in infancy and childhood, proceeding from the outermost layers of the atmosphere to the innermost.

Influence of environment.

First then as regards *country*. Its *nationality* affects character and not merely through heredity. The countless customs and ways that combine to form, say, the French environment as distinguished from the English, or again the English as distinguished even from the Scotch, are all special educators of the unconscious mind.

"The forms of *government*, their freedom or their tyranny, liberal institutions or misrule, influence the intellect and spirit of the people."[1]

"The influence of *climate* can hardly fail to be observed as shaping the character and temperament (these are unconscious mental qualities) of the race. The 'hardy northerner' is a proverbial expression, and all history testifies to the superiority of mental vigour in the races who inhabit temperate climes. The

[1] Dr. J. Pollock, *Book of Health*, p. 520.

northern parts of France and Italy are inhabited by people of superior energy to those of the south."[1]

Then as to *scenery* and physical characteristics of country.

"Many other agents are formative of character, such as mountains, rivers, lakes, plains and the ocean. The dwellers among mountains are very subject to home sickness or nostalgia; they are essentially patriotic; the inhabitants of plains are less so; while the dweller by the ocean is essentially a wanderer."[2]

To this may be added that mountains produce unconsciously hardihood and bravery; extensive plains, dulness and slowness of temperament; woods and forests, craft and superstition; the shore, frankness and restlessness.

There can be no doubt of the force of the local climatic, political, and national qualities of country, as unconscious educators of the mind.

Town and country.

Take the *country* now as an educator of the unconscious, as contrasted in its value with the *town*, and we see the difference between good and bad education at once. Dr. Karl Lange says: "It is not a matter of indifference whether we passed our youth in a quiet retired forest village, or in a damp dark dwelling in the turmoil of the metropolis. Different in many respects are the thoughts and feelings of the child from the metropolis and the child from the village and country town."[3]

"The best school," says Sir J. C. Browne, "for sense education is the home and the country."

[1] Dr. J. Pollock, *Book of Health*, p. 521. [2] *Ibid.*
[3] See Prof. Holman, *Introduction to Education*, p. 455.

The country, above all, favours late development. There, if at all, in the words of Isaac Taylor, "The force and fruitfulness of the mind may be kept in bud until the natural summer-time of action comes". England on the whole is the most favourable country and climate for a country life.

In towns the brain requires increasing artificial stimulus and excitement in the way of toys, sights, etc., etc. In the country nothing of the sort is needed, and yet the mind, that has had *its* eyes opened, is never dull.

The education received by the unconscious mind from a constant contemplation of bricks and mortar, lines of houses and streets and all the other monotonous and ugly works of man, and that received from a survey of nature in all her unity in diversity, her living and ever-changing face, make a profound difference in the foundation lines of character. The very sounds, and indeed all the different sensations in town and country, have their part in the forming and fashioning of the unconscious mind.

The first great point then about the "atmosphere" is that it should be country and not town. A whole chapter might profitably be devoted to this one subject, but space forbids more than the briefest reference to the various environments.

The next is the contrast between the education unconsciously received in the *home*, as compared with an institute, or orphanage, or any other place.

Home and institutions, etc.

"The parental home in which the man spends his infancy is where he receives these repeated impressions. The son of a professor receives manifold imperceptible impressions in childhood which hasten his intellectual development. The child of parents of high social position soon acquires the assurance and firmness of good manners."[1] But this is rather a special view. Speaking generally, "At home," as Isaac Taylor points out, "that atmosphere is most readily obtained which will promote the growth of the various faculties of the mind in nature's order and at nature's rate".

In early life the child has to fit the home, and bears all its characteristics and qualities impressed upon its unconscious mind. This then is truly and literally the world that has to be so carefully modelled; this is the atmosphere that has to be so pure and healthy; this is the arch-educator of the unconscious mind.

But in later life, say from the age of twelve on, it is the other way about in great measure; and it is no small rest as well as stimulus to the unconscious mind to have the environment made to suit it, instead of the mind having to suit itself to the surroundings. It is well to allow a girl or boy's bedroom to have a marked individuality of its own, according to their different natures; so that it is as important to have a well-fitting environment as to have a well-fitting coat or dress. I know a remarkable case of a very nervous lady who always frets and chafes in ordinary houses, but who has built herself a house full of the quaintest devices,

[1] Paul Radestock, *Habit in Education*, p. 53.

that fit her mind just like a shell, and give it repose and peace instead of subtle irritation. This is a case of the mould being made to fit the casting, instead of the casting fitting the mould.

In a way, our environments are always educating us, but only in childhood and infant life have we to adapt ourselves entirely to them whether bad or good; and this point on which we are now insisting gives the greatest proof of the all-importance of the character of the home in the first few years of life.

Health is ensured largely by plenty of light, air, and good food. With them, it is surprising how a child can resist all sorts of bad surroundings. If, on the other hand, a child is closely imprisoned in a small nursery, he becomes a hot-house plant mentally as well as physically, and must be carefully guarded at all points.

How then can the *house* educate the child? Well, in its garden and yard and stables by the animals, the trees, the flowers, the birds, the insects—these will cultivate observation, wonder, admiration, reverence, inquiry, pleasure, comparison, etc. The house itself, orderly, clean, plain in all its appointments, will produce order, cleanliness, simplicity, self-respect, carefulness in the child. The aspect bright and sunny—cheerfulness.

Environment of the house.

Then as to the *nursery* and the *nurse*. If the former is clean, tidy, with bright wall-paper, simple toys that can be built up, pulled to pieces and afford real employment to the child, good plain furniture, a good clock always going, well-served meals, it will stimulate un-

consciously in the child cleanliness, tidiness, order, constructive ability, ingenuity, perseverance, method, skill, self-respect, punctuality, attention, etc.

If the nurse be truthful, punctual, clean, kind, cheerful, well-informed, truly Christian and speak good English, we shall foster in the child truth, order, exactitude, propriety, love, gentleness, intelligence, reverence, and faith, and speech pleasant in tone and accent.

Thus can the unconscious mind be educated without a word being addressed to consciousness in early life.

We would not however be misunderstood and supposed to mean that no conscious instruction should be allowed. On the contrary, by all means let the good which these surroundings do be increased and strengthened by wise words addressed to consciousness. Only this is not our subject at present, greatly as we value it.

As to clothes, let them be clean, well cut, appropriate to the work or occasion, and carefully preserved. The child will learn personal cleanliness, self-respect, neatness, simplicity.

The food should be very plain, well cooked, and served to the minute, abundant in quantity, with plenty of variety.

One hint more. Just as a "northern climate" and a mountain district produce a better man than a southern clime and a plain, on account of the greater difficulties to be overcome; so do a plain home, a simple nursery, plain strong toys that afford scope for construction and

alteration, produce a better character than great luxury and ornament and expensive toys, where everything is done for the child and nothing left for him to do.

The hardships in childhood should never go the length of interfering in the least with the child's natural cheerfulness, still less with his health; but should be just sufficient to afford a gentle stimulus to his faculties.

It will be asked now, in what way does this environment work upon the child's mind?

How environment educates.

First of all, generally through the senses. "The education of the senses will not be neglected if children are only placed in positions in which abundant and varied sense impressions are accessible. Vivid and complete impressions are all essential to subsequent mental growth." [1]

The *sights* should therefore be agreeable, cheerful, bright, varied, harmonious, the faces loving and smiling.

The *sounds* gentle (not shrill), harmonious, cheery, not too sudden, varied.

The *scents* should be pleasing and varied.

The *tastes* should be agreeable, varied and simple.

The *touch* should be of objects of every quality and variety, and encouraged in every way.

The special means by which surroundings educate the mind are by unconscious suggestion; and the great result that is produced is apperception.

What is unconscious suggestion? The presentation

[1] Sir J. C. Browne, *Book of Health*, p. 346.

of unconscious ideas. What is an unconscious idea? *A living mental seed that, planted in the unconscious mind, flowers in consciousness.* It fires the mind, it sets in force long trains of action.

"One of the signal services of hypnotism is the demonstration of the intrinsic motor force of an idea."[1] Let us see what environment has to do with ideas.

Influence of ideas.

"An idea may invest as an atmosphere, rather than strike as a weapon; it may be a vague appetency towards something. To excite this 'appetency towards something' towards things lovely, honest, and of good report, is the earliest and most important ministry of the educator. These indefinite ideas are held in that thought which surrounds the child as an atmosphere, which he breathes as his breath of life; and this atmosphere in which the child inspires his unconscious ideas of right living emanates from his parents. That he should take direction and inspiration from all the casual life about him is a thought which makes the most of us hold our breath."

"The duty of parents is to sustain a child's inner life with ideas as they sustain his body with food. The child has affinities with evil as well as with good; therefore, hedge him about from any chance lodgment of evil suggestion. The initial idea begets subsequent ideas; therefore, take care that children get right primary ideas on the great relations and duties of life. Thus we see how the destiny of a life is shaped in the nursery, by the reverent naming of the Divine name,

[1] Prof. Baldwin, *Mental Development of Childhood*, p. 5.

by the light scoff at holy things, by the thought of duty the little child gets, who is made consciously to finish his little task, by the hardness of heart that comes to the child who hears the faults or sorrows of others spoken of lightly."[1]

"It would be possible through suggestions, without words, to prepare even from the third to the tenth month for the subsequent education through words. To do this we must carefully repeat those suggestions that are helpful towards harmonious development."[2]

The influence of play and playthings is great in setting the child to find out, search, pull and pick, build up and throw down, thus continually exciting fresh ideas.

It is initial ideas that fire the train of thought, and that is why beginnings are so important. "*Enter not* into temptation" derives additional force when we consider it as the first spark that fires the train.

Apperceptions in childhood.

The result of the entrance of ideas and gestures is that ever afterwards our perceptions are enriched with these stores. This is called apperception. It is the power of thus storing the unconscious mind with ideas that largely distinguishes the child from the animal. "A dog cannot recognise the outline drawing of a dog, but will bark at a picture of one. A child perceives the outline and immediately, by apperception from stores of ideas, fills in all the rest and recognises it is a dog."[3]

[1] C. Mason, *Parents and Children*, pp. 36-38.
[2] W. Preyer, *Mental Development of Childhood*, p. 41.
[3] See Isaac Taylor, *Home Education*, p. 122.

The whole process is unconscious, but affects the entire life. The words home, mother, nursery, childhood, God, mean in after life pretty much what was impressed unconsciously in suggestive ideas in childhood.

Apperception, or the enriching of mere perception with stores of mental information, is largely helped in children by their imaginative play. A ninepin with an old rag wrapped round it thus becomes a most cherished and lovely doll. The simpler and commoner the object the more is the child stimulated to clothe it with ideas. So that the toys should largely consist of bits of wood of various shapes and sizes, small bricks and stones, etc.; and these will be transformed into houses and furniture and bridges and trains and dolls to the great benefit of the brain.

The romance of childhood.

The importance of the element of romance in a child's life is enormous, and but little thought of. To the child it is largely the secret of its happiness. Every plaything, every room, all the scenes of its childhood are thus invested with a glamour wholly ideal. The parent who wisely understands this will use romance and parable largely in indirect training, and thus not only sow ideas, but mould the ideas already there to wise and useful ends. A large doll's house thus rightly used can be made a great agent in unconscious mind training. The rooms can be peopled with heroic, noble-minded, and unselfish dolls, where courage, foresight, justice and love can be continually and conspicuously displayed. And thus

the vivid imagination of childhood can be used to imprint indelibly on the brain the highest principles. The worst thing a parent can do is to check or ridicule this faculty.

The standpoint from which all is viewed in after life is fixed largely in infancy and childhood. Some who have been wholly neglected or viciously trained at this period owe the whole of their subsequent career of evil to the associations that poison their every perception of things afterwards; whereas, on the other hand, a wise training can overcome the most vicious hereditary taint. Mrs. Meredith of the Prison Gate Mission can bear witness to this. She has over and over again taken infants from their mothers in prison, steeped in generations of hereditary crime, and, by fashioning their apperception unconsciously on the Divine injunction that is such a mine of educational wisdom in training the unconscious—"Whatsoever things are true, whatsoever things are honest, whatsoever things are lovely, whatsoever things are of good report, . . . think on these things,"[1] by their surroundings physical and psychical, she has overcome the inherited vice of their natures, and reared girls who have pursued steady, useful and virtuous lives.

We do not think it possible in the training of the unconscious mind to form a more healthful atmosphere for the young child than one based upon the remarkable verse we have quoted.

[1] St. Paul, *Philippians*, iv. 8.

The railroad of habit.

We now turn to the second great branch of unconscious education—the discipline, or railroad of habit.

Locke says: "We must expect nothing from precautionary maxims and good precepts, though they be deeply impressed on the (conscious) mind beyond the point at which practice has changed them (unconsciously) to form habits".[1]

Niemeyer says: "The familiarising of young people with habits of order, cleanliness, decency and politeness will not be without lasting effect on their inner life".

"Habit goes further than precept, and the teacher must ascribe most of his successes to the formation of habits."[2] That is to say, unconscious education is more powerful and lasting than conscious.

Rousseau says: "Education is certainly nothing but a formation of habits". Character is undoubtedly the sum of a person's habits. We have already indicated sufficiently the physical basis of habits in chapter vi., and spoken too there at length of their general value, so that this need not be enlarged upon again here.

"The impalpable thoughts that we think, leave their mark upon the brain, and set up connections between the nerve cells; and the cerebrum grows to the uses it is earliest and most constantly put to. A great function of the educator is to secure that acts shall be so regularly, purposefully and methodically sown, that the child shall reap the habits of the good life in thinking and doing,

[1] Paul Radestock, *Habit in Education*, p. 4.
[2] J. G. Curtman, quoted by Paul Radestock, *Habit in Education*, p. 6.

with the minimum of conscious effort. Educate the child in these habits, and the man's life will run in them, without the constant wear and tear of the moral effort of decision. All the minor moralities of life may be made habitual to the child. He has been brought up to be courteous, prompt, punctual, neat, considerate; and he practises these virtues without conscious effort. It is much *easier* to behave in the way he is used to than to originate a new line of conduct. The formation of habits is the chief means whereby we modify the original hereditary disposition of the child until it becomes the character of the man." [1]

A bad habit is checked, not so easily by precept as by forming a good one to overcome it. Thus the unconscious cerebration of a greedy child runs on selfish lines of cakes and sweets. This is corrected by introducing a new idea and a new habit, that of the delight of giving pleasure to others with these good things; and this steadily practised for a month or six weeks becomes a new tendency or habit in the brain that replaces the old.

"The immense importance of this subject in the light of both physical and mental or moral education cannot be over-estimated." [2]

We will turn now to some special habits. One of the most important habits to fix in the unconscious mind is the faculty of discrimination by the senses; such as judging weights, heights, Special habits.

[1] C. Mason, *Parents and Children*, pp. 117, 118.
[2] Dr, Gerard Smith, *Habit in Man*, p. 25. Victoria Institute.

distances, sounds, sights, and remembering and describing them accurately. Here practice makes perfect. That is—Form a habit in unconsciousness, and the thing is done.

When to form habits.

The easiest and best time to form habits is in the growing structure in early childhood, notably before fifteen years of age. The earlier the period that habits are formed the more lasting are they, and reappear at a late period of life, when other habits acquired since have passed away. Plasticity of brain is essential, that is, tissues weak enough to yield to influences, and yet strong enough to retain them. After the brain is fully developed, that is, after thirty, or perhaps later, to acquire new habits and to give up old become alike more difficult. In old age we find, as we have said, that those habits that are acquired last are lost first. As a rule, personal habits are acquired before twenty, professional habits between twenty and thirty.

In forming the habit, the action must never be changed for a day. If it be the learning of some steps in dancing they should never be changed till fixed in the brain. Again, it is of great importance—and this has a very wide application to the training of children—that the habit be taught and executed accurately. If the steps be taught in a slovenly way they will always be executed in a slovenly manner. If a child learn sometimes that two and two make five, and at other times that they make four, there will always be confusion in the mind or brain paths.

Habits of thought are as truly and readily and often unconsciously established as habits of body, and, indeed, the two are sometimes inscrutably mixed; as in character as displayed in handwriting, as well as in the lines that habit has traced upon the face, rendering physiognomy a true science. Habits of thought.

We have also ideal habits, and here, as elsewhere, habit means ease.

Attention may be deliberately manufactured as a habit by the inattentive. For this is the charm and value about habit: that if we begin soon enough, and particularly in childhood, and pre-eminently before the age of ten, we can absolutely engraft into the child's character many of those valuable mental qualities which it may lack. The habit of *inquiry* is easily acquired in young life, and is invaluable in after years; and simply means going through life with one's eyes open instead of shut.

The habit of *perfect execution* is invaluable, but must be taught early. Perhaps no other mental habit leads to greater success in every calling in life. Sloyd is the physical means by which this habit is best taught in childhood; for the essence of sloyd is not what is made, but that it should be perfectly finished in all its parts.

Industry is another invaluable habit.

But we must pass on to moral habits. Now, if we wish to produce some valuable moral quality in a child, the easiest way to do it is to establish the quality as a habit; the most difficult and uncertain is to depend on direct precept. To be always Moral habits.

telling a child to be truthful is a poor way of making him so ; but to accustom him to use his words in talking exactly as a painter uses his colours in painting, so that his word-picture shall be a faithful copy of what he is describing, painted in words instead of water-colours—this persevered in will give him the habit of truthful speaking as a fine art, apart from its moral value, which, of course, will only strengthen the habit. In a similar way, most moral qualities can be formed as mental habits—deliberately, surely and easily as compared with any other method ; and, if sufficiently well established, it is harder to depart from them than to practise them. " Train up a child in the way that he should go, and when he is old he will not depart from it."

Courage is really the outcome, in nine cases out of ten, of the habit of facing danger. Children can be trained by habit not to feel pain. In Egypt you see children sucking sugar-cane with their faces almost black with flies that bite painfully. If these approach the face of a European child it screams with fear.

Habits can be formed unconsciously in childhood of truth, unselfishness, reverence, modesty, cleanliness, punctuality, attention, neatness, endurance, courage, self-control, humility, obedience, politeness, diligence, purity, kindness, courtesy, cheerfulness ; *or by bad training, of each and all of their opposites.* If this fact be weighed carefully it will be seen what an unlimited influence for good or evil this education has. We

cannot say more about it now. Those parents who wish to study it in detail should read C. Mason's works on the subject.[1]

We may just say one word about the other form of discipline; that is, punishment. Punishment.

The child should look on punishment not as the arbitrary infliction of wrath or passion, but as the automatic action of cause and effect; and when it gets the habit of this, discipline will be seen in its true and corrective light. Natural corrective discipline.

"This generates right conception of cause and effect. Proper conduct in life is much better guaranteed when the good and evil consequences of actions are understood than when they are merely believed on authority. A child who finds that disorderliness entails the trouble of putting things in order, or who misses a gratification through dilatoriness, gains (unconsciously) a knowledge of causation. It is a vice of the common system of artificial rewards and punishments, long since noted by the clear-sighted, that by substituting for the natural results of misbehaviour certain tasks or castigations it produces a radically wrong moral standard. Another great advantage of this natural discipline is, that it is a discipline of pure justice, and will be recognised as such by every child." [2]

Lastly, and very briefly, we must turn to the parents' part in this education. "Education is a life," not only

[1] C. Mason, *Home Education*, and *Parents and Children*. Kegan Paul.
[2] Herbert Spencer, *Education*, pp. 109, 110.

a living process, but an inspiring life to be lived by the parent, who is to be the ideal, the example, the model, the inspirer.

Education by example.

Plato shows the best training for boys does not consist of precepts and rules, but in letting them continually see some one do that which he admonishes others to do.

Here is where the education of the unconscious may break down. It is futile to surround the child in the nursery with a truthful atmosphere, to give him the habit of accurate statement, if he hears the father and mother lying and deceiving. The parents must exhibit in themselves in living action those principles they are seeking to imprint unconsciously in the child's mind.

"The mother's tender care, the father's kind seriousness, the relationship of the family, the order of the house must exist in all purity and worthiness before the child's ingenuous eyes, because he judges only what he observes, because what he sees is to him the only thing possible, the pattern for his imitation." [1]

Waitz shows the order or disorder prevailing in the house is unconsciously transferred by the child to the mental and moral state of the world.

"As mental instruction is most effectively imparted by visible illustrations, so is moral teaching best given by means of living examples. And where is the child to find these living examples if not in his home? The child's models must be those who are always about

[1] F. Herbart, *Science of Education*, 2nd edition, p. 71.

him, those upon whom he depends, those whom he loves, those whom he knows best."[1]

Herbart says again: "The members of a family look confidently to the head, and this sense of dependence favours the religious feeling. If the life of the family is permeated by a noble piety, a sincere religious faith will take root in the heart of the children. To the child the family should be the symbol of the order in the world; from the parents one should derive by idealisation the characteristics of the Deity. God is apperceived in the way the parent is appreciated; the child's ideas of the Heavenly Father are moulded unconsciously by the earthly one."

Responsibility of parents.

Again: "Where can the character fabric of the man be built up so readily or so permanently as in the home of his childhood, from the living example and experience, from the discipline and spiritual atmosphere which the parental hearth supplies? On the parents, therefore, responsibility for the moral (unconscious) character of their children must, in the nature of things, continue to fall. In order to exhibit the natural relations between parent and child, and to show how active willing obedience is the strictly natural response of the child to the loyal fulfilment by the parent of his natural and organic duties, the subjoined table is given:—

"*Table showing the correlation of parent and child:*—

Parents and children.

[1] A. Ransom, *Parents' Review*, Feb., 1897.

Parent's Prevenience.	Child's Obedience.
Love—Benevolence.	*Love*—Affection.
Sympathy.	Sympathy.
Watchful patience.	Reverence.
Help—Consistency.	*Help*—Expectation.
Service.	Service.
Encouragement.	Perseverance.
Experience—Guidance.	*Experience*—Loyalty.
Trustworthiness.	Security.
Wisdom.	Admiration."[1]

"The sense of duty may arise through the communication of one moral spirit with another moral spirit. This spiritual transference takes place most readily from those we love, trust, and admire. It takes place freely (unconsciously) by a process analogous to organic fertilisation. The parent's office is to develop within the child a moral will, free, wise, and strong. This can only be effected through active contact with environment, material and spiritual, through the wise use of sympathetic influence and example, and the careful presentation of ideas and ideals."[2]

We have seen that every child is born with two distinguishing characteristics, love and sense of justice. Now the mother ought specially to represent the ideal and example of the one, the father of the other.

Parents as inspirers.

With regard to the mother's influence, Preyer remarks: "Here must not be forgotten the suggestive effects of the conduct of the mother. Every look, every word, every movement

[1] H. Beveridge, "Obedience," *Parents' Review*, Feb., 1897. [2] *Ibid.*

are, without the knowledge of the mother or nurse, suggestive to the child, *i.e.*, they determine his mental representation, and, later, his actions." [1]

Children instinctively estimate the moral worth of each member of the family, and discern selfishness, vanity or hypocrisy with unerring eye. And girls often grasp truths sooner than boys, and hold them more firmly, but by unconscious instinct rather than by the conscious reason.

"There is no way of escape for parents; they must needs be 'inspirers' to their children, because about them hangs, as the atmosphere about a planet, the thought-environment of the child, from which he derives those enduring ideas which express themselves as a life-long 'appetency' towards things sordid or things lovely, things earthly or Divine." [2]

Parents stand in relation to their own children in somewhat the relation of a hypnotiser to his patient. Whatever the mother suggests to the child, the child unquestionably receives. "Has it cut its finger and cries?" "Never mind! Mother kisses it and makes it well," and it is well. "Is it in a temper?" "No," says mother, "Charlie is not in a temper; he is quite happy and loves mother and smiles at her." And, lo and behold! tears are replaced by sunshine, and it is all true. The power of good suggestion wielded by the mother is incalculable for good.

One hint and we have done.

[1] W. Preyer, *Mental Education of Childhood*, p. 115.
[2] C. Mason, *Parents and Children*, p. 36.

Mothers too often, with the best intentions in the world, cultivate their own virtues at the expense of their children's. Children are born imitators, and the mother is their ideal. If the mother cultivates and displays her own unselfishness in making the children the centre of everything, it does not make them unselfish, but selfish; for they imitate her, and naturally think they are the people to be considered, if mother thinks so. To produce unselfishness in children requires an unselfishness of a deeper type in the parent, that will make the children ever wait on her and think of her first.

Hints on conscious education.

And now leaving rather the direct subject of this chapter and our threefold text, we would like before finally saying good-bye to our childhood, to give one or two hints respecting education more or less conscious, and the way in which the unconscious mind may be formed through the conscious.

Herbert Spencer remarks: "We are on the highway towards the doctrine long ago enunciated by Pestalozzi that education must conform to the natural process of mental evolution. In education we are finding that success is to be achieved only by making our measures subservient to that spontaneous unfolding which all minds go through in their progress to maturity." [1]

Fröbel's system was a happy combination of the education of the conscious and the unconscious minds, and he also followed clearly the natural course of mental evolution. The unconscious mind can clearly

[1] Herbert Spencer, *Education*, pp. 58, 59.

be educated through consciousness. Unconscious apperception can be implanted and learnt by conscious training. The difference in result between the training of the conscious and unconscious in after life is worth noting. A man whose consciousness is better trained than his unconscious mind will only betray bad manners when off guard; his conscious actions will be superior to his instincts, as we say he will appear better than he is; while, on the other hand, a man whose unconscious mind has been thoroughly trained and educated, will have better instincts than conscious actions, and he will be at his best when most unconscious. We all know these two types, and can clearly see the difference between the results of training the Conscious and Unconscious.

Schools as a rule train the former, home the latter. The principle of the infant school—most knowledge in shortest time, at cheapest rate—should never be imitated in the nursery.

The guiding principle in all training is not to develop or excite faculties, but to feed them, delaying their display, always thus training for remote, and not for immediate results; and above all, not to over-train, for this is one of the great practical results of recognising the powers of the unconscious mind, that we see at once, if we have a certain sum total of mental force at our disposal, and if our unconscious mind requires a large amount for governing and directing the growth of the body, unless this is supplied, body growth cannot proceed whatever amount of food may be taken.

This gives the reason why, when all the mental force is used in direct education and over-pressure ensues, physical growth is stunted or arrested.

Fortunately now, there is increasing conformity in the artificial education of the conscious, to the earlier natural education of the unconscious.

It must not be imagined however that this latter education ceases when school lessons begin. On the contrary, the unconscious mind is being educated all through. Knowledge has been divided into practical (which is unconscious) and rational (which is conscious), and these two go on together.

And now a hint as to details.

Details as to order and qualities.

The true order of conscious education is "from the known to the unknown, from the simple to the complex, from the concrete to the abstract,"[1] and if this order were carefully observed in all studies from learning to read, to the study of Christianity and the Bible, fewer blunders would be made and far more satisfactory results would be obtained.

Discrimination and exact observation by contrast and comparison through the senses should be carefully taught, and all sensations should be cultivated to the last extent by discrimination. The difficulty here, as Preyer has remarked, is, that there is a "great want of discriminating terms in tastes, smells, touch, while colours and sounds are well supplied"[2] with de-

[1] Prof. Holman, *Introduction to Education*, p. 221.
[2] W. Preyer, *Mental Education of Childhood*, p. 12.

scriptive words. Of course words alone can do little; no words can teach the difference between red and green, nevertheless sense discrimination cannot be carried far without words to register its discoveries.

Again, it is as well to get the knowledge into the brain through as many channels as possible. Hence hearing a subject as well as reading it is a great help, and the former is often the greater educator.

"As a test of the ear and eye impressions received by reading 'As You Like It,' it was found that when read aloud to the class by the master they repeated it intelligently and understood the characters described; when, however, the boys were left to learn the task without hearing it read, they failed to appreciate its meaning. Good aural impressions produced a mental appreciation which sight of the page failed to effect." [1]

Attention is most important in education, and it is found that three-quarters of an hour at a time is the longest period at which it can be fully maintained. This, therefore, should be the extent of any one lesson requiring close attention. Attention.

Attention directed to any subject may be voluntary (conscious) or involuntary (unconscious). We can fix our attention by an effort which is sometimes very great, and a time may come when the strongest volition can no longer resist the other distractions or the sense of fatigue. In children fixed attention is almost im-

[1] R. P. Holleck, *Education of the Central Nervous System*, 1896. Of course the reason of the above is obviously that in hearing we have Shakespeare's thoughts interpreted through another brain to ours, whereas in reading we have them presented through the unintelligent medium of printed characters.

possible, unless it be involuntary (unconscious), the power of the will being as yet so slight. Children punished for not attending are often punished for what they can't help by effort, whereas a suggestion directing their thoughts automatically would at once succeed. In short, it is easier to secure unconscious than conscious attention.

The mind should be well grounded in nature before it studies art. Natural theology is the impression of the Divine mind in nature, and should precede doctrinal theology on the principle we have already given—the concrete before the abstract.

Science, moreover, and natural theology go hand in hand. "True science and true religion are twin sisters, and the separation of either from the other is sure to be the death of both. Science prospers exactly in proportion as it is religious. . . . The great deeds of philosophers have been less the fruit of their intellect than of the direction of that intellect by an eminently religious tone of mind."[1]

As a rule, emotions should be cultivated first and the intellect afterwards. "Do," and not "don't," should be the watchword, and punishments should not be arbitrary, but in the relations of cause and effect. "What a man sows that shall he also reap." And as a last word on the whole subject of child training we cannot do better than direct attention to the profound force of the threefold maxim of Holy Writ, "Offend not, despise not, hinder not one of these little ones".

[1] Prof. Huxley, quoted by Herbert Spencer, *Education*, p. 45.

CHAPTER XI.

THE UNCONSCIOUS MIND AND SENSATION.

In this chapter we propose to investigate the question of sensation in reference to the unconscious mind, and to see what claim the term "unconscious sensation" has to serious recognition.

Is there unconscious sensation?

We will begin by considering sensation generally and the physical basis on which it rests. We will then consider the question of unconscious sensation, and finally review the various relations of sensation to mental action, both as cause and effect. First of all, we will quote from those who assert that feeling must be conscious.

"Sensation is the most elementary form of conscious experience. Feeling (sensation) is only another term for consciousness, or the state of being conscious."[1]

"A feeling and a state of consciousness are, in the language of philosophy, equivalent expressions; everything is a feeling of which the mind is conscious."[2]

"Consciousness is not generally used for states of

[1] Pflüger, *Teleological Mechanism of Life*, quoted by Laycock, *Mind and Brain*, vol. i., p. 136.
[2] John Stuart Mill, *Elements of Logic*, vol. i., p. 54.

feeling, but rather for knowledge of them. Psychologists, who think that being conscious of a feeling is something different from merely having a feeling, generally refer to self-consciousness."[1]

"Having a feeling and having a sensation are not two things; the names only are two. When, instead of the word 'feeling,' I use the word 'consciousness,' I use a tautological expression. To say I am conscious of a feeling is merely to say I feel it. To have a feeling is to be conscious, and to be conscious is to have a feeling."[2]

"Movement presupposes sensation. Consciousness is a bye phenomenon which accompanies the reception of sensory impressions. It cannot be imagined as preceding sensation; it accompanies it."[3]

It will be observed that all these writers only regard sensation as conscious, or even as consciousness.

Physical side of consciousness.

"When an impression or sensation has affected the sensory ganglia, the resulting disturbance may be discharged in two ways. It may travel upwards to the cerebral centres, where it is perceived and is without doubt a conscious state; or it may pass along the sensori-motor arc into some movement, when it is not so certain that it is a conscious power."[4]

To reduce this to the phraseology already used in considering habit, the sensation or afferent current arriving at the sensory ganglia in the mid brain may

[1] John Stuart Mill, *Elements of Logic*, vol. i., p. 54.
[2] Jas. Mill, *Dualism of Human Mind*, p. 225.
[3] Dr. A. Hill, paper on *From Action to Volition*, Victoria Institute.
[4] Maudsley, *Physiology of Mind*, p. 198.

either continue upwards to the cortex and become conscious, or may be short-circuited in the mid brain, and so result in an action below the sphere of consciousness. (*See diagram.*)

We have already given a word of warning, however, against taking these arcs or currents too literally. Montgomery, indeed, believes the connecting medium between the cells not to be nerve threads at all, which is rather in accordance with the most recent views on the neuron.

He says: "It is highly significant that, contrary to our theoretical expectations, the most accurate observers have hitherto failed to discover any central intercommunication between sensory elements. Psychologists and daring or second-rate physiologists have, nevertheless, generally assumed such connections. The sensory nerve elements seem to terminate singly—to come to an isolated end."[1] . . . "Neuroglia (the ground glass connecting substance in which the nerve elements are embedded) will henceforth have to be considered the medium in which the synthesis of neural activities takes place. But amongst physiologists in general this structural climax of all organisation, instead of being deemed the precious embodiment of nerve essence, is looked upon as mere nerve cement."[2]

In confirmation of this view may be given the words of Dr. A. Hill himself, who has been already quoted with regard to the nerve arcs or circuits.

Paths of nerve currents.

[1] Ed. Montgomery, *Mind*, vol. v., pp. 23, 24.

[2] *Ibid.*, p. 27.

"In the paper which I had the honour of reading before the Institute (vol. xxvi., *Proceedings* of Victoria Institute) I suggested a possible anatomical explanation of the formation of habit. It is at present but a hypothesis, and we know so little of the ultimate structure of the 'ground substance' (neuroglia) of the nervous system that the hypothesis if not disproved is likely to remain for long unproved ; but the highest magnifications seem to bear out the opinion that the ground substance is a network, the strands of which are of almost infinite tenuity. It is possible that the passage of impulses increases the width or conductivity of these strands, beats down paths, in fact, which subsequent impulses find it easier to travel." [1]

This last thought exactly accords with that of Sir Michael Foster, quoted in chapter vi., p. 131, and with what we have advanced in chapter viii.

The question as to the physical paths of sensation and other mental impulses is so interesting that, before leaving it, we will give the conclusion C. Mercier arrives at as to the nerve currents and the neuroglia.

"In a thoroughly organised nerve region the cells are definitely and completely constituted, and their communications are made by fibres that are also definite and completely constituted with axis cylinder, medullary sheath, and neurilemma complete. But in a region which has not completed its organisation, we find that the cells are less definitely constructed, that the fibres

[1] Dr. A. Hill, paper on *Inquiry into Formation of Habit*, p. 24. Victoria Institute.

are far less demarcated from the matter in which they are embedded. So little indeed are they differentiated from this substance (neuroglia) that it is often a work of difficulty, of delicacy, and of much labour, to establish the difference between them; and the difference becomes greater the further the fibres are pursued.

"In short, it appears that the fibres and the ground substance in which they are embedded are so closely alike in constitution that there is no difficulty in accepting the conclusion that is pressed upon us by other considerations, that the former are formed out of the latter by a slight re-arrangement of the component molecules. Granting that such a formation is possible, we have to seek the agency by which it is brought about, and the conclusion seems to the writer irresistible that this agency is the passage of currents of nerve energy in different directions through the ground substance (neuroglia). Wherever such a passage of energy takes place, it will leave behind it a track or pathway showing where it has passed; and, more important still, it will leave this pathway smoother, more permeable, and more easily traversed by subsequent currents. Every subsequent current that passes that way will do its part towards scouring out the channel until at last a passage will be found, open, free, and readily permeable to currents that are about the mean volume." [1]

Now as to the possibility of sensations being unconscious.

Unconscious sensations.

"A multitude of impressions are constantly

[1] C. Mercier, *Tuke's Dictionary of Psychology*, 1892, p. 255.

being made upon us to which the 'ego' appears to pay no heed. We do not attend to impressions below a certain assignable intensity, nor to those which have become habitual, or which do not vary in intensity. None of these are able to cross the threshold of consciousness. Moreover, a vast number of the strong and varying impressions that are made upon us are perpetually jostling upon, but unable to cross, this threshold; for, like the eye, our ego can only discern clearly that upon which its attention is directed. As Professor W. James in his *Psychology* remarks, 'One of the most extraordinary facts of our life is that, although we are besieged at every moment by impressions from our whole sensory surface, we notice so very small a part of them. . . . Yet the physical impressions which do not count are *there* as much as those which do.'"

"For all these impressions, whether we are conscious of them or not, leave some mark behind. They weave a perceptible or imperceptible thread into the fabric of our life; they make a greater or less indent upon our personality. We know that this is the case, for impressions of which we were unconscious at the time often emerge when the attention is withdrawn from things around, as in states of illness, in dream or in reverie."[1]

Dr. Waldstein also says: "There is hardly a moment . . . when the nerve endings in the skin are not constantly assailed by sensations of pressure, of temperature, of the flux or reflux of the blood supply. While we

[1] Prof. Barrett (Dublin), *Humanitarian*, 1895.

are completely unconscious of all these impressions, yet they enter into and increase the material of the sub-conscious self." [1]

Feelings not necessarily sensations.

Feelings, it may be remarked, are not, strictly speaking, necessarily sensations, not being connected with senses, and may and do exist in the semi-conscious region.

"It is correct to draw a line between feeling and knowing that we feel. It may be said in one sense that we cannot feel without knowing that we feel, *but the assertion is verging on error.*" [2]

"1st, Is consciousness to be accepted as co-extensive with the reaction of the sentient organism? 2nd, If not, is it the super-addition of some activity in the brain which co-operates with the mechanism of sensation? 3rd, Or is it rather to be taken as a quality of certain mental states due to the particular conditions at the moment?" [3]

"There are myriads of vague feelings constantly flitting around the outer zone of consciousness, which, being unnoticed, can't be recalled by memory, yet these are scarcely to be signified by the name of sensations." [4]

"Unconsciousness is a sentient state—not the entire absence of sentience we attribute to a machine. No one would think of calling a machine unconscious or a dog inhuman; but we may call a man inhuman, and a sentient act unconscious. A process may be un-

[1] Dr. Waldstein, *The Sub-conscious Self*, p. 13.
[2] James Mill, *Dualism of Human Mind*, p. 227.
[3] G. H. Lewes, *Problems of Life and Mind*, prob. ii., p. 145.
[4] James Sully, *Intuition and Sensation*, p. 64.

conscious and suddenly acquire the distinctness of a conscious state." [1]

Wundt admits imperceptible sensations.

Wundt observes that there must be indifferent (unconscious) sensations, since pleasure and pain are opposites which pass over from one to the other through a point of indifference. This point must in any case be imperceptible.

"Sensuous pleasure always occurs along with a furtherance, and pain with a disturbance, of organic life." [2]

"An example of a pleasure (sensation) through the exercise of the unconscious will is the matron's pleasure in the new-born child, or the transcendent bliss of the happy lover." [3]

"The sensory stimuli of the objects to which we are thoroughly accustomed affect us unconsciously, or nearly so; we see them without perceiving them." [4]

"Though the cerebral centres (cortex) are undoubtedly the seat of clear consciousness, the sensory centres may still be conscious *after a fashion of their own*." [5] The italics are ours, and the sentence forcibly reminds us of Lewes' position, who sees consciousness everywhere, as we have stated in an earlier chapter—even in the spinal cord, while as a rule Maudsley sees the unconscious.

It is remarkable therefore to find such an idea as the one just given, in his writings, though common in those

[1] G. H. Lewes, *Problems of Life and Mind*, prob. ii., p. 151.
[2] Lotze, *Medical Psychology*, quoted by Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 252.
[3] Ed. v. Hartmann, *Philosophy of the Unconscious*, p. 251.
[4] Maudsley, *Physiology of Mind*, p. 230.
[5] *Ibid.*, p. 243.

of hypnotists and others. We know and can know nothing of such a consciousness, because it is not our consciousness. Throughout this work consciousness is used in its ordinary sense as the consciousness of the man, and whatever mental process is not within its range we call unconsciousness. This does not assert or deny, though we confess we find it difficult to grasp the idea, whether individual centres or organs, or possibly cells, have a consciousness of their own. Of this we know nothing, and with it this work is not directly concerned.

Our consciousness of sensation is, as has been pointed out, by no means implicitly to be trusted. "Every sensation is located by consciousness in the periphery, which information is incorrect."[1]

Sensations produced abnormally.

Sensations can be truly produced by other means than peripheral irritation. Setting aside all material agencies, these sensations can undoubtedly be produced by the mind, acting both consciously and unconsciously.

John Hunter says: "I am confident that I can fix my attention to any part until I have a sensation in that part".

The transition is easy from the irritation of real sensations to those actually produced by expectation in the ideal centres, only we must remember the mind produces *sensation by ideas*, not *ideas of sensation*. The difference is enormous.

"Whatever mental or bodily state can be excited

[1] Maudsley, *Physiology of Mind*, p. 23.

through the senses from without may arise from within, from imagination proper." [1]

Braid took four men between forty and fifty years of age, and told them to fix their attention on their hands for five minutes. One, a member of the Royal Academy, felt intense cold in the hand; an author, darting and pricking pains; a mayor felt heat; a scientific man had the arm cataleptically fixed to the table.[2]

The sensations in the hand by thought are produced probably by real vaso-motor changes in the hand, set up by the mental excitation of the sensory centre in the brain.

"The expectation of a blow increases the pain felt." [3]

Ideal sensations.

Professor Bennet tells a story (already quoted) of a butcher "who rushed into a druggist's shop in great agony, having, as he explained, slipped and caught his arm on a sharp hook by which he was suspended. He was pale, almost pulseless, and in acute pain. He screamed when the arm was moved and the sleeve cut off, and yet it was quite uninjured, only the coat being hooked." [4]

"Two medical students were engaged in dissection; one playfully passed the *handle* of his scalpel across the finger of his friend, who started, shrieked, and then confessed that he felt the pain of the blade cutting through to the bone." [5]

[1] Hack Tuke, *Mind and Body*, 2nd edition, vol. i., p. 30.
[2] Braid, *Hypnotism*, xx., p. 93.
[3] Hack Tuke, *Mind and Body*, vol. i., p. 36.
[4] Prof. Bennet, *Mesmeric Mania of* 1851, p. 15.
[5] Gratiolet, *La Physiognomie*, p. 287; see G. H. Lewes, *Problems of Life and Mind*, prob. iii., p. 277.

"One of the oldest examples of mind pain is quoted by Burton," says Hack Tuke, "of a parson's wife in 1607 who, being falsely told by a physician that she was troubled with sciatica, the same night after her return had a severe fit of it."

The sensation of the teeth on edge may be excited by an acid on the teeth (normal irritation), by scraping glass (transference from auditory canal, which lies by the side of the nerve, from teeth in a bony canal), by seeing glass about to be scraped (transference from optic nerve by association), or by the mere thought of it being done (transference from ideal centres). In each of these cases the mouth may be filled with saliva.

Braid records the following:—

"A man (twenty-nine) rested his right arm on the chair with the palm upwards, when he was told to look away and concentrate his attention on any feeling in that arm. In half a minute he felt a slight pricking, which was intensified to a feeling of electricity. All this time I had done nothing. I then desired him to tell me what he felt now, putting emphasis on the word *now*, leading him to think I was conducting some different operation. The result was the former sensation at once ceased; but when I asked him to say what he felt *now*, the former sensations all returned. I then whispered to his wife so that he could just overhear me, 'Now his fingers will draw up, his hands be clenched,' which effects immediately followed. All this time I did

absolutely nothing. The man was very intelligent, wide awake and had never been mesmerised, hypnotised or tested before." [1]

"A lady of fifty-six taken into a dark closet and desired to look at the poles of a powerful magnet of nine elements speedily saw sparks pouring forth from them like fireworks. Without her knowledge I closed the box in which the magnet was placed, but still the same appearances were seen." [2]

We could of course multiply these instances of special and ordinary sensations produced by the mind *ad infinitum*, but we feel many more would prove *ad nauseam*, as the phenomenon is now so well known and established. We therefore pass on.

We will now give a few instances of feelings produced by memory.

Sensation produced by memory.

Giddiness on knowing we are approaching a great height or dangerous path is often felt, the result of unconscious memory of similar positions before. This is never felt by animals.

Dr. Kellogg, quoted by Hack Tuke, tells us that "when young he always had to cross a rough arm of the sea in a small steamboat, when he was invariably sick. On the boat was an old blind fiddler. The result was that for years after he never could hear the violin without experiencing nausea."

Miss Frances Power Cobbe sat in a room to write where she had sat and studied eight years before. She felt her feet moving restlessly under the table, and then

[1] Braid, *Power of Mind over Body*, p. 17. [2] *Ibid.*

remembered eight years before she always had a foot-stool. It was this the feet were seeking.[1]

Some instances of feelings stopped by mental action, mainly unconscious, may now be given.

Sensations arrested by the mind.

Anæsthesia is common with melancholics, hyperæsthesia with neurotics. Insensibility and pain are common in mental disease.

Soldiers in victory remain practically insensible to cold. Hunger and thirst are modified by the condition of the mind. Thirst is often removed by attention being diverted. On the other hand, it is very common among soldiers at the beginning of a battle. Soldiers in battle seldom feel any pain in the wounds until the battle is over. Carpenter says, and the writer can bear most emphatic testimony to the same fact, that he has often found in speaking, when suffering from severe rheumatic pain, that it has entirely ceased to be perceived until he sat down, when it returned in full force.

Pains, it is well known, go when the doctor comes, and toothache ceases in the dentist's room.

Dr. Carpenter discusses the question in such instances as to whether the pain has been consciously felt though not remembered. He rightly considers this as a mere assumption; for, although the changes may occur in the sensorium, they cannot be said to be felt without consciousness.

"During the O'Connell agitation in Ireland, Lord

[1] F. P. Cobbe, *Darwinism*, p. 326.

Anglesey, who had suffered for years continuously from tic-douloureux, was quite free from pain."[1]

Sensation produced by ideas.

With regard to feelings producing unconsciously psychical effects, Unzer points out that any severe painful sensation inflicted excites the retaliating or war instinct before its cause is even known.

The following will illustrate feelings producing physical effects unconsciously.

In 1882, Braine, of Charing Cross Hospital, as recorded by Tuke, effected complete anæsthesia with a clean inhaler and no smell of chloroform, and two sebaceous scalp tumours were removed. On removing the inhaler between the two, the patient (a girl) began to get conscious, but went off again on reapplying it, and declared she felt nothing all through. Ten years after, he gave air only in an inhaler, and ten teeth were extracted without any pain being felt.

The smell of ether three inches from the nose has produced anæsthesia and heavy breathing.

Gratiolet tells us of a law student who, being present for the first time at an operation on the ear, felt at the same time such a sharp pain in his own ear that he involuntarily put his hand to it and cried out.

Observe finally that, as ideas can be strengthened by attention, so can sensation be increased, producing severe irritation.

In summing up this short chapter, we would say that

[1] Greville, *Journal of the Reigns of George IV. and William IV.*, vol. ii., p. 109.

a very small proportion of the afferent currents arriving at the brain produce conscious sensations of any kind. If the term "unconscious sensation" be objected to, let "unconscious irritation" be substituted; for they certainly produce the same effects on the unconscious mind which in the conscious we term sensation; and, furthermore, we have shown that sensations can be produced by the unconscious mind, arrested by it, and can produce themselves psychical and physical effects through its agency.

This chapter, which might well be the longest in the book, is one of the shortest, for which the reader will be thankful. We fear, however, further instances of the connection between sensations and mind will have to be inflicted upon him when we come to speak of the unconscious mind in relation to disease.

CHAPTER XII.

THE UNCONSCIOUS MIND AND THE BODY GENERALLY.

Body formed and maintained by psychical activity.

We will in this chapter consider the general relations of the unconscious mind with the body and brain. We will give examples in connection with these relations of physical and psychical effects, and point out the value of the relations we are considering.

We will give some extracts bearing on the remarkable power of the unconscious mind over the body.

The unconscious mind, in addition to the three qualities which it shares in common with the conscious, *viz.*, will, intellect and emotion, has undoubtedly another very important one—nutrition, or the general maintenance of the body.

"The explanation that unconscious psychical activity itself appropriately forms and maintains the body has not only nothing to be said against it, but has all possible analogies from the most different departments of physical and of animal life in its favour, and appears to be as scientifically certain as is possible in the inferences from effect to cause." [1]

"The connection of mind and body is such that a

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 202.

given state of mind tends to echo itself at once in the body." [1]

"If a psychosis or mental state is produced by a neurosis or material nerve state, as pain by a prick, so also is a neurosis produced by a psychosis. That mental antecedents call forth physical consequents is just as certain as that physical antecedents call forth mental consequents." [2]

"Mind, through sensory, motor, vaso-motor and trophic nerves, causes changes in sensation, muscular contraction, nutrition, and secretion." [3]

"If the brain is an outgrowth from a body corpuscle and is in immediate relation with the structures and tissues that preceded it, then, though these continue to have their own action, the brain must be expected to act upon the muscular tissue (whether striped or unstriped), the organic functions and upon the nervous system itself." [4] By the word "brain" all through these extracts is obviously meant its mental powers, and especially those that are unconscious; in short, the unconscious mind.

These powers can, of course, be set in action by the conscious will.

In willing any conscious act, "the unconscious will is evoked to institute means to bring about the effect. Thus, if I will a stronger salivary secretion, the conscious willing of this effect excites the unconscious will to institute the

This psychic power is unconscious.

[1] Maudsley, *Physiology of Mind*, p. 302.
[2] Carpenter, *Physiology of Mind*, p. 302.
[3] Hack Tuke, *Mind and Body*, vol. i., p. 2.
[4] *Ibid.*, p. 16.

necessary means. *Mothers are said* to be able to provide through the will a more copious secretion, if the sight of the child arouses in them the will to suckle. There are people who perspire voluntarily. I now possess the power of instantaneously reducing the severest hiccoughs to silence by my own will, while it was formerly a source of great inconvenience to me."[1]

"An irritation to cough, which has no mechanical cause, may be permanently suppressed by the will. I believe we might possess a far greater voluntary power over our bodily functions if we were only accustomed from childhood to institute experiments and to practise ourselves therein."[2]

Many of these illustrations are quite familiar to some of us, but the explanation of the agency of the unconscious mind in carrying out the fiats of consciousness is probably new.

The following conclusion, however, is very important:—

"We have arrived at the conclusion that every action of the mind on the body, without exception, is only possible by means of an unconscious will; that such an unconscious will can be called forth partly by means of a conscious will, partly also through the conscious idea of the effect, without conscious will, and even in opposition to the conscious will".[3]

The following is a reference to the obscure effect of surroundings on unconsciousness, shown physically:—

[1] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 178.
[2] *Ibid.*, p. 179.
[3] *Ibid.*, p. 201.

"We know at night the cortex (here, as we take it, Professor Clouston refers not to consciousness which has its seat here, but to the unconscious mind) is in a totally different state from its condition during the day. Do not all febrile affections become worse at night? Are not all mental affections then at their worst? Neuroses, epilepsy, spasmodic diseases are all aggravated. Most people die in the early hours of the morning."[1]

"Mental phenomena cannot be referred to bodily as effects to causes, but there is a uniform co-ordination between mental processes and definite physical processes in the brain. The connection can only be regarded as a parallelism of two causal series side by side, but never directly interfering with each other, in virtue of the incompatibility of their terms. It is psychophysical parallelism."[2]

"All those inferences that unextended spirit and extended matter can have no relations with each other are set aside by the obvious facts that one *does* affect the other. The spirit can take the body, and by conscious and unconscious activities, mould it for a dwelling place and instrument for its uses, before it enters into possession by sensibility and intelligence."[3]

Relations of mind and brain.

The relations of qualities of mind with the characteristics of the brain are not obvious. Dogs, horses, elephants, whales have increasingly beautiful and numerous convolutions, but their minds do not increase in the same ratio. Monkeys

[1] Prof. Clouston, *British Medical Journal*, 18th Jan., 1896.
[2] Wundt. [3] Noah Porter, *Human Intellect*, p. 39.

have no convolutions, only commencing fissures, and, though smooth, are most like human brains, and yet in intelligence, etc., are far below horses or dogs. In relative qualities the ape is further removed from the human race than most other animals.[1]

It may be mentioned here in connection with the vast range of work carried on by the human brain, that it is roughly computed (Meynert) to have some six hundred million separate nerve cells. Later calculations throw doubt on this.[2]

"The highest mental centres can be demonstrated to have abundant and direct connection with the lower motor and trophic centres."[3]

The mental centres in the cortex have, we may here remark, the power of directly influencing physiological functions and tissue nutrition. Of this we shall give some remarkable instances when we come to speak of the unconscious mind and nutrition. Going to sleep is undoubtedly largely the result of suggestions from the unconscious mind, which also brings a general feeling into consciousness when, on waking, enough sleep has been had; or, on the other hand, when it has been insufficient.

"The general bodily feeling which results from the sense of the different organic processes is not attended with any definite consciousness."[4]

But certain mental feelings seem connected with de-

[1] Buffon, *Natural History*, vol. iv., p. 61.
[2] Prof. Clouston, *British Medical Journal*, 18th Jan., 1896.
[3] See *British Medical Journal*, 9th Oct., 1897.
[4] Maudsley, *Physiology of Mind*, p. 254.

finite parts of the body—love with the heart and melancholy with the liver, while to arrive at the highest point of mental insight, there has always been a tendency to direct the thoughts to the pit of the stomach, or just above the navel; here lies the great solar plexus, chief centre of the sympathetic system. Many feelings are connected with this region, and we speak of a sickening story, sickening thoughts, etc. The Bible speaks of "bowels of mercies," "straitened in your own bowels," etc.

Relation of feelings with regions of the body.

The organic or vegetative functions as well as the skin and hair are specially affected by the emotions. A short time of extreme trouble may make a man look many years older than before it commenced. The eye will lose its brightness, the face will become withered, the brow wrinkled and the hair blanched. Fear may check perspiration and produce skin diseases.

"A lady saw a heavy dish fall on her child's hand, cutting off three of the fingers. She felt great pain in her hand, and on examination the corresponding three were swollen and inflamed. In twenty-four hours incisions were made, and pus evacuated." [1]

"The influence of the most dissimilar emotions on the functions of secretion are well known, *e.g.*, vexation and anger on bile and milk." [2]

"The unconscious mind as revealed by hypnotism can exercise marvellous control over the nervous, vasomotor, and circulatory and other systems. A hypnotised

[1] Dr. Carter, *Pathology and Treatment of Hysteria*, p. 24.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 181.

subject can hold out his arm indefinitely in painless contraction, can inhale strong ammonia under the name of otto of roses with unwatery eyes." [1]

Hypnotic and hysteric phenomena.

"There seems no reasonable grounds for doubting that, in certain chosen subjects, congestion, burns, blisters, raised papules, bleeding from the nose or skin can be produced by suggestion." [2]

"The expectation," says Braid, "of a belief of something about to happen is quite sufficient to change the physical action of any part." [3]

"The sensation of heat and cold can be abolished by the unconscious mind, and high temperature produced in the blood by the same agency without disease." [4]

In hysteria the unconscious mind suggests and carries out states of morbid feeling, which to a great extent can be inhibited by the power of the conscious will.

"We talk and laugh and weep, we blush and we shiver, we hunger and sweat, we digest and defæcate all through the brain cortex. There is not one of these physiological acts but can be instantly arrested by a mental act." [5]

This is not perhaps literally correct, if only a conscious mental act is meant, as in the case of blushing, sweating in disease and shivering in a rigor; in these

[1] W. James, *Psychology*, vol. ii., p. 602. [2] *Ibid.*, p. 612.
[3] Braid, *Power of Mind over Body*, p. 6.
[4] Excluding, of course, deception, as in the patient mentioned elsewhere, who could always produce a temperature of 110° in the mouth by compressing the bulb with her teeth.
[5] Prof. Clouston, *British Medical Journal*, 18th Jan., 1896.

the mental act must be excited unconsciously to have the greatest effect.

The effects of a purgative pill have been rendered *nil* and it has produced sleep in the belief it was an opiate pill, though consisting of a strong dose of colocynth and calomel. On the other hand, an opium pill given for sleep has failed to produce it, but proved a strong purgative in the belief it was so intended.

Laughter stamps a merry look on the face, which, by degrees, becomes permanent, and tends to produce a happy disposition. If you set your face truly to express any passion, you tend to feel that passion.

"A complete fit of drunkenness can be produced by drinking vinegar as champagne. There is no limit to the power of illusions or to their variety but your own power of invention. On the other hand, real sensations, as we have seen, may be entirely abolished."

Here is a good illustration from Braid:—

Examples of psychic power over the body by suggestion.

"I passed a gold pencil-case from the wrist to the fingers ends of a lady fifty-six years old without touching her, and she experienced a creeping, twitching sensation in that hand until it became quite unpleasant. On getting her to look in another direction and describe her feelings, the results were the same when I made no movement at all, the whole being evidently caused by the power of the mind in causing a physical action of the body. With another lady I took a pair of scissors and passed them over her hand laid upon the table from the wrist downwards without contact. She immediately felt a creep-

ing sensation followed by spasmodic twitching of the muscles so as to toss the hand from the table. I then desired her to place her other hand on the table, so that she might not observe what was being done, and in the same length of time similar phenomena were manifested, though I did nothing. I then told her her hand would become cold, and it was so; then intensely hot." [1]

The following is also from Braid:—

"A London physician who mesmerised by the use of a powerful magnet had a patient in a magnetic sleep. He told me the mere touch of a magnet on a limb would at once stiffen it, which at once proved to be the case. I now told him I had a small instrument in my pocket which was quite as powerful, and offered to operate on his patient, whom I had never seen before, and who was asleep when I entered the room. My instrument was only three inches long, as thick as a quill, with a ring at the end. I told him, when put into her hands, both arms would become rigid, and such was the case. I then took the instrument from her, and again returned it in another position, and told him now it would have the reverse effect, and she would not be able to hold it; and now, if her hand was forcibly closed on it, it would open of itself, and such was the case, to the great surprise of the doctor, who wanted to know what had been done to the instrument to invest it with this opposite power. This I declined to tell him till he had seen the following proofs of its remark-

[1] Braid, *Power of Mind over Body*, p. 15.

able powers. I told him that a touch with it on either leg would cause it to rise and become rigid, and such was the case. That a second touch would relax the rigidity, and cause it to fall, which proved to be a fact. She then awoke. I then applied the ring of my instrument to the third finger of her right hand, from which it was suspended, and told the doctor it would send her asleep; to this he replied, 'It never will'. I told him again I felt sure of it. We then were silent and she speedily went to sleep.

"Having roused her again, I put the instrument on the second finger of her left hand, and told the doctor it would be found she could not go to sleep when it was placed there. He said she would, and steadily gazed at her to send her off. After some time he asked her if she did not feel sleepy, to which she replied, 'Not at all'. I then requested her to look at the point of the forefinger of her right hand, which I told the doctor would send her to sleep, and such was the case. I then roused her, and made her go to sleep again by looking at the nail of the thumb of the left hand. I then explained to the doctor that the wonderful instrument which I had used was the key and ring of my portmanteau."[1]

In a factory at Hebden Bridge in 1787 a girl popped a mouse into the bosom of another girl. She got a fit. The next day three more girls had fits. On 17th February, the next day, six more. The works were stopped, as it was supposed to arise from a bag of cotton.

[1] Braid, *Power of Mind over Body*, pp. 32, 33.

On the 18th fourteen more had fits, one being a man ; the fits lasting from fifteen minutes to twenty-four hours. Dr. St. Clare cured them (through the unconscious mind) with the electrical machine.[1]

"A young lady gave her father laudanum in mistake. When he died she was struck down, and lay ten months till death from general œdema set in. There was a *post-mortem* examination, and there was no cause of death but dropsy from mental causes."[2]

Generally speaking, the quality of mental occupation influences longevity. Poets average fifty-seven years, clergymen over sixty-five. Of course there are other factors.

More examples of physical action of unconscious mind.

We will give a few more instances of the action of the unconscious mind over the body before considering in conclusion the general value of this power.

Instinctive fear is often seen in young children who will be quiet when carried upstairs by a strange person, but restless when carried down.

"An uncultured person telling a story follows it with unconscious appropriate gestures. That they are not due to volition is plain from the fact that they follow the more surely the more he loses himself in the subject."[3]

Of this nature are the shrugs of the Frenchman and all unconscious gestures.

[1] Hecker's "Epidemics of the Middle Ages," *Gentleman's Magazine*, 1787.
[2] Sir H. Marsh, *Dublin Quarterly Journal*, vol. xliv., p. 9.
[3] Maudsley, *Physiology of Mind*, p. 303.

I have a servant who, being naturally somewhat of a mimic, whenever telling me any message unconsciously gives it in the voice of the person who gave it to her.

It is very curious how we place our body in attitudes corresponding to our mental states, just as we have already seen bodily attitudes may cause mental states. If we try to see a thing with our mind we often put on an intense and strained expression with our eyes. If we are in a state of delight the eyes are fixed in ecstasy. Some words almost seem to have a pleasant or disagreeable taste.

How great grief paralyses the body generally! Falling in love, too, affects the whole body, while the shock of breaking off an engagement suddenly may produce profound anæmia, or blanch the hair in twenty-four hours.

On visiting at houses, a person with a good ear and imitative character soon begins unconsciously to adopt the voice and mannerism of his hosts. It is impossible to be seized with a vivid idea without the whole body being placed in harmony with this idea.

In pride, it has been said, a man seems to "taste himself".

Now, as to the importance of all this:—

"The influence of the body on the mind is great, but that of the mind on the body is even greater; and a recognition of this truth is essential, both in the prevention and treatment of every form of disease. Every process in the

Importance of unconscious mind to the body.

body is liable to be controlled by nervous (mental) influence. All functions may be violently and continuously influenced by mental causes." [1]

We do not enter further on the therapeutic value of the mind here, because the subjects require and will receive, as already intimated, special attention in a future chapter.

But the value of mental action on the body has a far wider scope than therapeutics. The body has to be trained by the mind, and in saying this we would beg our readers to consider that the process is entirely involuntary; that is, it is the unconscious mind, so little thought of, that does the work, and not the conscious.

Facial expression due to unconscious mind action.

To it we owe all the intelligent and varied expressions of the face, the only beautiful forms of it being those that are unconscious, so readily distinguished from the conscious imitation put on artificially by the force of the will. To it we owe the carriage of the body, so that you can judge of a man's character by his gait, his postures, his physical manner and habits, the unconscious mind in its nobility or its degradation being indelibly stamped upon the body.

"He is a dull scholar," it is said, "who cannot read a man's character even from a back view." Round a statue of the Prince Consort in Edinburgh stand representative groups paying homage to him. If you get a back view of any of these you see unconscious mind impressed on matter, and can tell at once the sailor or soldier,

[1] Dr. E. Haughton, Dublin, *Laws of Vital Force*, 2nd edition, p. 46.

peasant or scholar or workman. Look at the body and face of a man when the mind is gone. Look at the body of a man who has lost his self-respect. Look at the body of a thief, of a sot, of a miser. Compare the faces and expressions of a philanthropist, of a beggar, of a policeman, of a scholar, of a sailor, of a lawyer, of a doctor, of a shopwalker, of a sandwich man, of a farmer, of a successful manufacturer, of a nurse, of a refined girl, of a servant, of a barmaid, of a nun, of a ballet dancer, of an art student, and answer to yourself these two questions: First, are these different expressions of body and face due essentially to physical or psychical causes? And, secondly, do these psychical causes act on the facial and other muscles in consciousness or out of consciousness? The only possible answers to these two questions leave us with this fact, were no other proof possible, that we each have within us an unconscious psychical power (here called unconscious mind) which has sufficient force to act upon the body and display psychical conceptions through physical media.

CHAPTER XIII.

THE UNCONSCIOUS MIND AND THE SPECIAL SENSES.

I.—Sight.

All senses are psychical.

In entering upon this interesting and important subject, let us clear the ground by emphasizing the sufficiently obvious fact that the special, and indeed all, sensations are psychical and not physical. The apparatus is physical, but sight, hearing, smell, taste, touch, and common sensation are functions of the mind, not of the body; while the media which appropriately convey to the brain the various vibrations which the mind recognises under these names, are all physical and material.

The eye, therefore, itself sees no more than a camera; it is essentially a nervous sensitive plate, on which, by means of a lens, the light picture is impressed. This impression is thence conveyed by nerve vibrations, first to the mid-brain (optic lobes), and then, if the picture is to be consciously "seen," to the cortex (occipital region). Until, therefore, the vibrations reach the cortex, there is no conscious "sight".

Without actually dogmatising, the first journey we apprehend brings it before the unconscious mind; the latter, before the conscious mind. Anyhow, there are

three centres of vision: the retina, the physical or organic centre; the ganglia (*corpora quadrigemina*) in the mid-brain, the unconscious psychical centre; and the ganglia in the cortex, the conscious psychical centre. The order of development is also the same as that here given. As far as we know, all the special senses have thus three centres —physical and unconscious and conscious psychical. This last has been proved by Herman Munk, in Germany, to be in the occipital region, that of speech being similarly proved to be in the left parietal region by Broca of Paris.

Three centres of vision.

As stated in a previous chapter, we do not absolutely dogmatise on the correspondence of the two cerebral centres with the spheres of consciousness and unconsciousness; but we do say, from their position respectively, it is at least probable they are used for these two purposes, and at any rate we emphatically state that conscious and unconscious mental vision does take place, whether these centres correspond with it or not. We think they do, and we are not alone in so thinking, and we will give this proof for what it is worth.

"Destruction of the retina produces physical blindness, destruction of the visual brain centres produces psychical blindness (Ferrier); and further, we have some considerable evidence that destruction of the cortical centre alone, leaving the mid-brain centre untouched, destroys consciousness of sight only, and the unconscious vision remains and serves to guide the animal (as in a pigeon mechanically picking up corn, etc.)."

Irritation of the centres causes light sensations.

The next point is that a deaf man can truly hear noises, and a blind man see sights; hence the irritation or vibration of the psychical sight centres need not be received from light or sound, or from the physical centres or apparatus at all.

The physical centres may be irritated by a blow or by drugs, and this may cause flashes or abnormal vision without any light at all, as in a blow on the closed eyes in the dark, or, on the other hand, can be set in motion by ideal centres, the resulting sight or sound being indistinguishable from that produced in the normal way. We give one or two instances as to drugs.

Dr. Mitchell Bruce, after taking five fifteen-grain doses of salicylate of soda, found they caused visions of unpleasant faces when the eyes were closed.

Cannabis Indica (Indian hemp) causes visual hallucinations; alcohol in delirium tremens, hallucinations of cats, rats, mice, etc. Quinine may cause definite sounds like a barrel-organ.

Dr. Lauder Brunton saw a light spot with rainbow colours round continuously, after taking nearly one grain of digitalin.

Now, as to the production of visual sensations by pure ideal excitation.

Pure ideas can form sight sensations.

"There is no sensation, general or special, excited by agents acting upon the body from without, which cannot also be excited from within by emotional states affecting the sensory centres." [1]

[1] Hack Tuke, *Mind and Body*.

I know personally a shorthand writer who, when listening to an address (not writing it), clearly sees the shorthand outlines while the man is speaking.

"Talma said when he entered on the stage he was able, by the power of the will, to banish the audience from his sight and to substitute in their place so many skeletons. This gave such an impulse to his acting as to produce the most startling effect." [1]

A friend of Dr. Tuke in a crowd clearly saw himself being crushed to death.

"Dr. Bidder, Q.C., when performing mental calculations, referred to certain visual numerals vividly depicted by his brain. Professor Beer, of Bonn, is able in the same light to contract or dilate his pupil at will, by thinking of darkness or light." [2]

Second sight, in the Highlands, has been well established by the researches of the Psychical Research Society. Here peasants and farmers walking along the road see funeral processions, etc., with such vividness that they step out of the way to avoid them, and can tell the names of the people who compose them. Second sight.

Sir B. Brodie knew a gentleman who, when he fixed his thoughts intently on an imaginary object, could see it projected upon the opposite wall with all the distinctness of reality.

"A piece of green paper is exactly covered by a piece of transparent white paper; the latter appears greenish owing to the shimmer through it of the under green.

[1] Hack Tuke, *Mind and Body*, vol. ii., p. 147. [2] *Ibid.*, p. 167.

A piece of grey paper about the size of a wafer is then inserted between these two. The normal colour of such a grey spot, seen through white transparent paper, will be that of a dull white; but now is it neither grey nor white nor greenish, but rose red. Perhaps you think it is owing to the eye being stimulated by the green ground that this rose-red appearance is due? Not so. For leaving the papers just as they are, the rose-red appearance vanishes directly you bring another piece of grey paper near the first, but *on* the thin covering paper instead of *under* it; having seen the rose colour vanish thus, you see it reappear directly the second piece of grey paper is removed. That the colour is not produced by the direct stimulation of sense, but by the indirect stimulation of an unconscious judgment, is the paradoxical explanation of this surprising fact."[1]

Persistence of sight impressions.

At the Leeds meeting of the British Association, Professor Stivelly gave the following anecdote: "One morning, soon after breakfast, I stood gazing at a hive of bees just beginning to swarm. They were dashing rapidly about against the bright sky in a most curious yet regular confusion. In the evening, as it grew dark, I again went out to see the beehive, and was much surprised to see, as I thought, multitudes of large flies coursing about in the air. I told my sister-in-law, who said I must be mistaken, as she had never seen an evening on which so few flies were abroad. Soon after, in my bedroom, when I knelt to my prayers, I was surprised to see between me

[1] G. H. Lewes, *Problems of Life and Mind*, problem iii., p. 273.

and the wall, swarms of bees, all in rapid whirling motion, as in the morning. This scene continued as long as I remained awake, nor had it entirely faded by the next night, though much less vivid." [1]

The vivid visions in dreams, when the minutest details of landscape or room are seen, will occur to many, and also day dreams, as, in town, on closing the eyes one sees the country house with the garden and orchard, the vision being greatly intensified if there are any helpful associations through other senses to support the ideal vision, such as the hum of a bluebottle in the room, or the smell of violets or roses.

Even in sleep the vision is aided by adventitious sounds.

Hypnotism generally effected by sight centres.

The facts of hypnotism supply an interminable series of illustrations of visual delusions, with which we will not weary our readers. We will only give one or two as specimens. But first let us call attention to the singularly simple way in which a person can be placed in the hypnotic condition.

Dr. Bain says: "It has been determined by experiment that persistent imagination of a bright colour fatigues the sense of sight. Still more, however, a bright light or reflection, which need not be moved at all, but simply gazed at, will throw a person into that will-less waking sleep endowed with special powers, known as hypnotic." [2]

[1] G. H. Lewes, *Problems of Life and Mind*, problem iii., p. 273.
[2] A. Bain, *Mind and Body*, p. 90.

And here we may aptly consider a quotation from Radestock. He says: "Hobbs remarks, 'It is *almost* immaterial to a person whether he always perceives the same object or nothing'; but Bain thinks he should have said '*wholly*,' for it is a well-known fact that an unchanged impression on our senses has the same influence as none at all. 'A change of impression,' says Bain, 'is necessary if we shall grow conscious of it.'"[1]

Quite so; but Hobbs should have said "almost the same *to consciousness*". Bain might have added "*wholly* the same *to consciousness*". Both these, it will be observed, rashly conclude, because the same object soon ceases to have any *conscious* effect, that, therefore, it has *none*—a most dangerous fallacy, and one into which such writers could never have been betrayed were it not for the deliberate ignoring of the unconscious. Now we see in hypnotism that the persistent gazing at the same object has a very marked effect, and is by no means the same as not seeing at all; and it is undoubtedly true that when an object no longer affects us consciously, it still has unconscious effects.

It is very curious that the hypnotic condition is nearly always induced through the eyes in some way. It would appear that vibrations entering the brain by this channel have a more potent and sudden effect in altering the condition of the mind and consciousness than by any other.

Professor Binet of the Sorbonne says: "If we close the

[1] Paul Radestock, *Habit in Education*, p. 97.

better seeing eye of an hysteric and place before the worse seeing eye a series of words in diminishing type, some of which the worse eye cannot read at that distance, and then place a pencil in the subject's hand, the pencil will often write, without the subject's knowledge, certain of the words thus found illegible. The employment of automatic writing thus shows that the subject does (unconsciously) perceive the letters, the arm being 'hystero-anæsthetic'." [1]

Hypnotic sight phenomena.

"Bergson reports that a hypnotic subject read a book held by the operator from its reflection in the cornea of the operator's eye." [2]

A friend of mine, a hypnotic physician in London, together with a physician from Nancy, who happened to be over here, simultaneously hypnotised some ten or twelve patients who were waiting for treatment in his consulting-room, and who had all been hypnotised at various times before. The two doctors then arranged them round the table and directed their attention to a Turk who, they told them, was sitting cross-legged upon it. The patients all declared they saw him, and as the details were successively suggested, so the man became clearly visible to them. The doctors then told them they would see him slowly rise from the table and gradually disappear through the ceiling. This was watched with intense earnestness until the last trace of the Turk had disappeared through the ceiling. They were bidden to remember what they had seen and

[1] Prof. Binet, *Alterations de la Personalité*, p. 120.
[2] W. James, *Psychology*, vol. ii., p. 609.

shortly after were awaked. My friend assured me that they would next day, if required, separately state on oath in a witness-box, what they had seen, and what had never occurred, in perfect good faith, and he considered that this example threw a great deal of light on the powers of ideas over vision, and showed also how ghost stories and appearances at séances might be described in good faith though never seen, through the beholders being temporarily in a hypnotic condition. This indeed is a more common phenomenon than most are aware of. The other day I received a letter from a lady friend stating that, when in bed with a girl about eighteen, the night before she woke up and found this girl sitting up in a hypnotic trance, and on looking on the opposite wall saw a bright reflection of the moonlight from a bit of glass, from looking at which the girl probably had got unconsciously hypnotised. She wanted to know how this was to be avoided for the future, as she had great difficulty in waking her.

So far we have given instances of pure ideal vision. Now for one or two of ideal vision proved to be unconsciously aided by association.

Ideas aided by association.

Professor Binet tells us of Dr. A., who, with his mind full of an examination on botany, walked past a restaurant and saw on the door "Verbascum thapsus".

He turned back astonished and read the real word "Bouillon". The unconscious connection instantaneously formed in his mind was that "bouillon blanc" is the common name for "Mullein" or "Verbascum thapsus".

Dr. Hack Tuke is responsible for the following:—

"The effect of imagination upon the sense of sight is shown in the following story. Two merchant captains, in an inn that was crowded, had to sleep in a room with a dead body. One of them, who was a great wag, asked the other if he had ever slept with a corpse before, to which he replied 'No'. 'Then,' said the other, 'are you aware in such cases, after midnight the room gets filled with canaries, which fly about and sing most beautifully?' When the candle was put out, his companion heard music, as if the room was full of canaries, and avowed that he both saw and felt the birds flying about in all directions. He became so excited he rushed downstairs, insisting the room was quite full of birds, that he had seen and felt them flapping their wings against him. The captain had some excuse for saying he heard them, for his companion had imitated the notes of a canary by a small whistle."

Imagination, sight and sound.

Professor Scripture, of Clarke University, U.S.A., shows a card, with a picture in the middle and a small letter of the alphabet printed beneath, to a patient for a short time, making him stare steadily at this picture in such a way that it only is consciously seen, the letter being in the range of vision, but not perceived.

Yet afterwards, if the letter is shown by itself on a card and steadily gazed at by the same person, a dim presentation of the picture that was on the card with it is seen also.

When the Crystal Palace was burning (1866), a large

crowd of people, hearing the chimpanzee had escaped to the roof, watched the unhappy animal trying to get across one of the iron ribs, as the newspapers informed us, "with sickening dread". But there was no animal there, only a tattered piece of torn drapery the imagination made into an ape. (Dr. Bramwell.)

In like manner, probably, stories of Indian jugglers climbing up a rope they throw into the air and disappearing, and such like incredible feats by eye-witnesses arise. It is said that a Dublin professor photographing in India with a friend who was sketching, attended one of these manifestations in the open air. A very pretty and realistic sketch of the marvel was made by the artist, but the professor, on trying to develop his plate, found the crowd there but the marvel missing.

The two following are quoted by Hack Tuke:—

"George Combe, having been present at an execution, went out of his house the same evening; having put on his hat, he saw in the twilight an image of the executed criminal dangling before him in the air, and he flew back into the house to the light. He then saw about three inches of the black cord of his hat hanging down in front of his eyes, which so vividly recalled the cord of the execution that he saw the whole scene."

"A lady walking to Falmouth saw by the road a drinking-fountain having the inscription, 'If any man thirst, let him come unto Me and drink'. She had been much occupied about drinking-fountains, and mentioned the fact with pleasure to her friends. They told her there was none there, and on going back with them, she

found a few scattered stones had formed the foundation on which her mind had built the picture."

These two actions of the unconscious mind, of "pure ideal vision" and "ideal vision with suggestion," will come before us again in connection with disease.

Now for an instance or two of unconscious vision producing conscious results.

Unconscious vision with conscious result.

"A lady in crystal gazing (staring into a piece of crystal until, consciousness being partly in abeyance, the unconscious comes into view) saw a bit of dark wall covered with white jessamine. She was conscious she must have seen it somewhere, but had no recollection where. She walked over the ground she had just traversed, and found the wall, which she had passed unnoticed." [1]

"She took out her bank-book one day. Shortly afterwards she was gazing at the crystal and saw nothing but the number, 7694. She thought it was some cab number, but taking up the bank-book found, to her surprise, it was the number of it." [2]

"At another time she destroyed a letter without noting the address. She only remembered the town. After gazing at the crystal some time, she saw H— House only. (The name of the house was seen in full, but only the initial is given here.) She addressed the letter thus, adding the town, and found it was right." [3]

Some years ago a clergyman visited Pevensey, in Sussex, and he became conscious of a vivid impression

[1] *Journal of Psychical Research Society*, vol. v., p. 507.
[2] *Ibid.* [3] *Ibid.*

of having seen it before. His mother subsequently told him he had been there when he was eighteen months old.

In the *Spectator*, the Rev. F. W. Lang tells a story of Fearon Fallows, Astronomer Royal at Cape Town. When Fallows was at Cambridge he saw one night an apparition of a friend drowned in Cumberland. He was so much impressed by it he told all his friends at Cambridge. Some weeks afterwards a friend took up an old newspaper in Fallows' room, with the story of the drowning in it, which Fallows must have read quite unconsciously while reading hard for mathematics.

We will give two out of many personal instances.

Personal instances of unconscious vision.

The other day, leaving home for Brighton, I was stopped at the door by a suggestion from my unconscious mind that I had not enough money in my purse. I looked and found only a few shillings. I had previously opened my purse often that day, and the sight of these shillings was unconsciously registered in my brain, and somehow this fact was presented to my conscious mind at the door. How often in a similar way, impulses and fancies of unconscious origin direct our steps, and even save our lives. History is full of such instances.

Staying in a country house last summer for a month, I had a bedroom with such a low door that, unless I stooped, I always bumped my head. For the first few days I got many knocks; afterwards my movements were unconsciously adjusted, so that I never knocked myself. In the same way, in my consulting-room I

have a weighing-machine with sharp projecting corners, and many a knock I got on my shin when it first came. Now I never touch it, my course being directed to avoid it by my unconscious mind.

We will now lastly consider the question of unconscious vision becoming conscious, or prevented from so doing, and other connections of the two.

Connection of conscious and unconscious vision.

In everything we see there is a part (opposite the blind spot) that is not seen. This is always filled in appropriately by the unconscious mind. The shadows of the corneal blood-vessels always fall on the rods and cones behind (the sight centres), but the unconscious mind disregards these, and never send their impressions up to consciousness, except when, as Purkinje's images, "they are thrown on fresh, newer elements in a peculiar way".

In reading, we are unconscious of all the letters unless a word is misspelt, when our attention is at once arrested.

In conjuring tricks, the unconscious mind sends up into consciousness a good many visual impressions that never came from the eye but were furnished from ideal centres.

Here may be mentioned the perpetual action of the unconscious mind in making us allow for perspective with the diminished size of far objects, which we at once judge to be of normal size, though apparently only as large as toys.

Unconscious application of perspective.

The other day I learned its value by the want of it,

I was looking at an unaccustomed view out of a window, and opposite were a field and some trees. The field appeared very steep, like the side of a hill, with trees on the top. I am rather short-sighted, and could not for the moment realise that what appeared the slope of the field was merely it stretching away in the distance, and the moment I corrected the view by the apperception of the perspective element, I saw there was only a very slight slope, and no hill.

The pseudoscope.

Sir Charles Wheatstone invented the pseudoscope, which makes convex surfaces appear as concave, and *vice versâ*, by reversing the stereoscopic picture. If you look with it at the interior of a mask, the image in relief is seen at once, as we are not accustomed to see the interior of masks, and there is, therefore, no conscious image to overcome. If we look with it on the outside of a mask, it is seen as concave with great difficulty, because we are familiar with the convex appearance of the outside. And lastly, if we look at a face with it, it is impossible to see it as concave, as we are too familiar with its real structure.

Zöllner finds himself driven to an admission of unconscious influences for an explanation of these pseudoscopic phenomena, which defy the merely physiological explanation.

In connection with this will be remembered Pears' advertisement picture of the three cubes, which can be seen as one on two or two on one, according as the one or other is suggested to the mind.

A man may try to recall a name and look in a directory

for it, but, though under his eye, he fails to recognise (apperceive) it, for his unconscious mind has not yet had time to find it in his memory. Five minutes after he has closed the book he recalls the name, which he could not do when he actually saw it with his eye. (Carpenter.) That is to say, the visual impression on the brain, though conscious, fails to recall the mental image of the mind, which the unconscious mind succeeds in a few minutes in doing.

I saw that a ticket collector at Westbourne Park noticed that my ticket, when I gave it up, was for the wrong station. He said nothing, and only after he had got nearly to the next carriage did he turn back and speak about it. It took that length of time for the sight message to travel from the retina to his conscious cortical centre and be perceived there.

Conscious visit inhibited.

Look at this line of capitals, and note that you observe no great difference between the upper and lower halves of the letters and figures. Now look at them upside-down, and you see how great the difference really is that you could not see before :—

S S S S 8 8 8 8 Z Z Z Z X X X X B B B B E E E E

The suggested explanation is that the conscious sight centre in the cortex sees *fresh* objects exactly as they are, but with regard to *familiar* objects (letters, etc.) the lower centre (in the unconscious region) after a time only sends up material points to the cortex, neglecting minor details, so that we do not see *these* objects as they really are. We, therefore, do not view

our relatives, familiar faces or our surroundings as a stranger does: he sees much that we do not; and, mentally, as we all know, truths in familiar words lose their force, which they regain if fresh words are used.

The following is headed "An Anxious Sportsman" in the *Daily Telegraph* of 8th September, 1896. A boy fired at a bird rising nearly just behind his father.

"I remarked to him afterwards," said the father, "that I quite expected him to injure me, and mentioned the particular instance." His reply was, "I never even saw you". The boy, no doubt, was so keen on bagging his bird, that he really did not see the father.

In looking through a microscope where attention is given to the object, the other eye can be open without seeing anything, all messages from it being inhibited before they reach consciousness, as completely as if the eye was shut.

Driving with a lady the other day, I asked, "Did you see those ladies cycling?" "No, I didn't," she replied, "I never see them now; when they first began I saw them every one."

An American can entirely ignore the board and rail fences and roadside raggedness, that so disfigure his country, which a newly-arrived European is always remarking.

A stranger in a town may be so attracted by what he sees, as to find it impossible to talk on any important subject. Only one special sense can fully enter consciousness at the same time.

"The vividness of an image decreases with time, and this is the rule which we unconsciously apply in determining distances in time." [1] Thus we know a thing happened long ago if its image is faint in our mind, just as we know an image is far away if its impression on the retina is faint.

Vividness decreases with time.

When a subject is vividly before the mind, all sights relating to it are sent up into consciousness by the unconscious, in a way it never is when the mind is not so occupied. When buying carpets, we notice all carpets everywhere; when furnishing, all the furniture in our friends' houses; all unconsciously, and so in everything. Conscious impressions thus weaken in proportion to the repetition, until they go altogether. Pursuits, prayers, theatres, races, tours, scents, tastes, touch, heat and cold, all these lose by constant repetition. Familiarity breeds contempt. The country is marvellous to cockneys and the town to country cousins.

[1] Sully, *Illusions*, p. 256.

CHAPTER XIV.

THE UNCONSCIOUS MIND AND THE SPECIAL SENSES AND SPEECH.

II.—Hearing.

We now come to the special sense of hearing and its relation to the unconscious mind. There can be no doubt that it is second in importance, as well as in our present order. Impressions of sight act more powerfully on the brain than hearing or touch.[1] Smell, taste and ordinary sensations are on a lower plane.

First of all, as to auditory sensations excited by ideas:—

Ideal auditory sensations.

Some years ago, when constantly called out at nights, I frequently heard, as I thought, the night-bell ring distinctly. On going down I found it had not been rung and the bell quite still. After long practice I could still only distinguish doubtfully between the real bell, the sound of which was a little more vivid, and the ideal.

I had for some months a clever trained nurse with a patient who kept shouting loudly at her. In taking her exercise alone out of doors she constantly heard

[1] The fact that things heard impress us more than things read does not contradict this, but is due to other reasons.

shouts at her ear so absolutely realistic that she always turned to see who it was.

A sailor shipwrecked and almost drowned heard his mother's voice distinctly say "Tom, did you take James's cake?" an awful question addressed to him forty years previously.[1]

Of course we have also ideas produced by sounds. Dr. S. Bettmann has shown that the vigour of the conscious mind is much weakened at sunset, and the unconscious power of the church bell has been immortalised by Millet in his "Angelus".

In the same way, the subtle connection between stained glass and incense and religious feelings is well proved.

Of course sounds of all sorts are heard from irritation in disease of the auditory nerve, such as bands of music, peals of bells, rushing water, etc. (This last is very probably the flow of blood in the carotid artery, which is close by.) All these sounds would lead us to erroneous conclusions were their source not deduced by unconscious reason, and so with other sense illusions.

Now, as to the action of the unconscious mind on hearing:—

"The ear," says Tuke, "often responds to well-known sounds when it does not to others. A distinguished oculist could not possibly be roused from his sleep until a friend whispered in his ear, 'I have a foreign body in my eye; can you remove it?' The effect was electrical."

[1] F. P. Cobbe, *Darwinism*, p. 316.

"Two sisters, one a mother, are sleeping in the same bed, when the baby cries in the next room. It only awakes the mother."

"A waiter asleep could not be roused by shouts of 'Johnson,' 'Wilson,' etc., but woke at once at 'Waiter'." [1]

Consciousness and hearing.

In hypnotism the person may be deaf to all but the voice of the operator. Bells may be ringing and strong noises of all sorts made, to which he is utterly insensible.

"M. Delboeuf relates, that having paid a visit to a country house which was near a waterfall, the noise of the fall at first almost prevented his hearing the conversation at table. He gradually got accustomed not to attend to it, and on the sixth day, on awaking during the night, he could not hear it at all. In vain he listened—no sound was heard. He got out of bed, and on going to the window the sight of the falling water made the fall audible." [2]

Unconscious hearing is illustrated by the following:—

"I feel myself suddenly elated while studying the titles of a collection of books in a shop window. Surely the sight of a new book on the British *Nudibranchiate Mollusca* cannot be a cause of this powerful sense of joyfulness! Nothing that I can see can explain this sudden mood. I close my eyes and listen. Among the noises of the street I can distinguish the sounds from a barrel-organ, and I presently recognise the tune it is playing as an air that I heard long ago in my first

[1] G. H. Lewes, *Physical Basis of Mind*, p. 416.
[2] G. H. Lewes, *Problems of Life and Mind*, prob. ii., p. 190.

quadrille. There can be no doubt that we are thus powerfully moved by sub-conscious impressions many times in the day, and that our actions are often governed by them."[1]

Familiar sounds cease to rise to consciousness.

If we live near a boiler factory we soon cease to hear it, or if, as in a friend's case, we live near a large dairy where milk cans are washed at night, it soons fails to wake us. There appears to be in the sub-conscious mind some power of choice as to whether an impulse shall be short-circuited or sent up to the cortex. (*See diagram.*) By experience I find that if I move about the room in the morning when my wife is fast asleep, and make loud noises by moving the basin and chairs, etc., they do not wake her; though it cannot be exactly from habit, for probably the exact noise has not been heard before, but rather from an unconscious knowledge of who makes it. On the other hand, the faintest noise in opening the door—often heard before—wakes her up, because it suggests some one else entering. The lower mind seems to think it is the only sound message requiring the attention of the cortex, and so sends it up. It is almost like the action of a private secretary opening all letters and placing a few before his chief, answering the rest himself. The unconscious mind, we must remember, is not only the active agent in all habits, but in all voluntary conscious actions as well.

There is no doubt as to sights and sounds, both being

[1] L. Waldstein, *The Sub-conscious Self*, p. 83.

frequently arrested in our unconscious brains, and not allowed to rise to the level of consciousness.

Mental tension increases hearing.

Mental tension greatly increases the power of hearing. The Highland woman in the residency who heard the distant bagpipes when Havelock was approaching to the relief of Lucknow is an illustration. The well-known story of the servant girl of twenty-five who, in delirium, spoke in Hebrew and Greek words and sentences she had overheard when living with a former master in early youth, is a good instance of the way in which, when the conscious faculties are in abeyance, the unconscious become apparent.[1]

"In Goethe's conversations with Eckermann we read: 'I know of a case where an old man of the lower classes, on his deathbed, was heard suddenly to recite several Greek passages in the most elegant Greek. . . . It was presently discovered that in his boyhood he was compelled to memorise and to declaim Greek sentences. Not until he lay at the point of death fifty years later did these meaningless words come up again!'"[2]

An ear stopped with wax hears well up to a certain point. If the wax be taken out the hearing is too acute for a time, until the tension is unconsciously readapted.

III., IV., V.—Taste, Smell, and Touch.

Sense of taste.

The mind alters *taste*. A man sent the cream away because it was sour, but found it sweet when the servant brought it in again—he imagining it was a fresh supply.

[1] See *Coleridge's Literary Biography*, new ed., 1848, vol. i., p. 234.
[2] L. Waldstein, *The Sub-conscious Self*, p. 128.

The irritation of one special sense often produces further sensations.

"Mantegazza knew a man who could not taste vinegar without having a sudden sensation of cold at the back of the neck. A terrible sight always makes my legs feel cold." [1]

So F. Galton records innumerable cases of numerals suggesting tastes, smells, colours and shapes.[2]

The taste, or rather sensation, of the teeth on edge can be produced by the scraping of a slate pencil on a slate, or even by the idea of it. What is the cause?

We hear the scraping, and as an unpleasant sound is composed of air waves of irregular lengths, it jars the auditory nerve. It happens that the auditory nerve lies in a bony canal alongside a nerve that is connected with the teeth and tongue, and this jarring is communicated from one nerve to another in this canal by contiguity, and the brain receives the sensation of the teeth being set on edge, shortly after the disagreeable sound is heard. This illustrates the transference of vibration from a nerve of especial sensation to one of common sensation.

In the case of the idea of the scratching, this transference was caused by the action of the unconscious mind.

As to *smell*. The same irritation, electricity, for instance, can produce on the different special senses respectively, flashes of light or distinct

Sense of smell.

[1] G. H. Lewes, *Problems of Life and Mind*, problem iii., p. 284.
[2] F. Galton, *Inquiry into the Human Faculty*.

sounds, the smell of phosphorus, a peculiar taste, or a feeling of pricking.

"Professor Bennet tells us of a Scotch procurator-fiscal," says Tuke, "who, on having to exhume a body, declared when the coffin appeared that he perceived a strong odour of decomposition, which made him so faint he had to leave. On opening the coffin it was found to be empty."

The action of the unconscious mind in presenting a fact to the conscious mind is remarkably illustrated in a recent story of Sir R. Quain's. He was sent for to a man aged forty years, who had a delusion that his body had a most offensive smell, none being perperceptible. Subsequently, however, the abdomen was opened and a most offensive abscess discovered.

Sense of touch.

As to *touch*. Dr. Pearson, when he first took up a globule of potassium and was told it was a metal, exclaimed, "Bless me! how heavy it is," simply from expecting it to be so, whereas it is excessively light. The sense of touch, with the sensation of weight, heat and cold, etc., is governed by the mind. Mr. Cumberland has often sat with each hand resting on the hand of a friend. When they shut their eyes they still felt his two hands, although one of them had been removed.

Touch can be brought to such acuteness that blind people can recognise friends they have not met for years, by the mere contact of their hands. In the same way, amongst certain Indians, smell is so acute that on the darkest night they can scent the approach

of a stranger, and distinguish his nationality. (Carpenter.)

Speech.

A word in conclusion as to *speech*, which is best treated with the special senses. We must not here go over the ground again so exhaustively covered by C. Bastian, in his lectures reported at length in the *British Medical Journal*, 1897, vol. i., on amnesia, aphasia, aphemia, and like psychic and physical disorders of speech, with what they reveal as to brain and mind. The story is so complete and recent and easily accessible as he tells it, that we pass it with the remark that it gives the strongest corroboration of unconscious mental processes in connection with speech. We will, then, content ourselves with giving one or two brief extracts from other writers.

Faculty of speech.

"There is a very important distinction between the prior unconscious or sub-conscious reproduction of words, and the sequent conscious and voluntary reproduction of words: the latter alone is speech. . . . There is evidence for saying generally that it is the right half of the brain which acts when the sub-conscious remembrance of words begins, the left when there follows the verbal action which we call speech."[1]

"The source of language is in the unconscious. The more we analyse language, the more clearly we perceive that it has never been possible that the foundations of language should have been laid in a conscious manner."[2]

Source of language is the unconscious mind.

[1] Dr. Hughlings Jackson in *Brain*. [2] Schelling, *Einleitung in Mythologie*.

"Consciousness is not an essential accompaniment of speech, which may be conscious, sub-conscious, or entirely unconscious."[1]

Unconscious speech.

Our unconscious words betray our characters. "Every idle word" may very possibly mean every unconsidered word, *i.e.*, every word that betrays the real man's character. Therefore, after uttering an oath a man often declares with honest conviction he never used the expression.

We may hear a slang expression or a new song, we do not notice it particularly, but the unconscious mind does; and the result is we find ourselves unconsciously repeating the words, or humming the tune shortly after; and the curious part is, that we can often hear the air perfectly if we will do it with the sub-conscious mind, whereas if we try to hum it consciously, it goes from us. After a time, when its conscious impression has had time to deepen, we can hum it at will.

Ejaculations, swearing and the use of slang words are generally instances of unconscious speech. Words can be unconsciously reproduced that have long lain dormant out of consciousness. "An old Welshman who had left Wales for fifty years and had quite forgotten his native language, spoke it frequently in delirium."[2]

"An Italian with yellow fever at the beginning of his illness spoke English, in the middle French, and at death Italian only."[3]

[1] Maudsley, *Physiology of Mind*, p. 232.
[2] W. Carpenter's *Mental Physiology*, 4th edition, p. 437.
[3] *Ibid.*

Our relations of tone and gesture to the words we read, all unconscious mental adaptations, are further illustrations of how the action of this ignored part of our minds is essential to every part of our life. We all know the painful effect when the tone and manner do not correspond with the meaning of the words; as when a passage is read in an unknown language, or by a wholly illiterate person.

We may conclude with an illustration of the action of the unconscious mind in perfecting and connecting ideas and words, given us by Isaac Taylor.

Unconscious mind in childhood.

"In the seventh year a child uses a vocabulary of one, two, or three thousand words with fully as much celerity of utterance and certainty of recollection as he can do afterwards; and the acquirement of this ready use at so early an age seems to imply that the acquisition has been helped by some latent process which assimilates ideas and words in an indissoluble manner."[1]

No doubt this is true and the process of the unconscious deepening and perfecting of complex actions has long been recognised in Germany, where it said we learn skating in summer and swimming in winter, which we have previously shown means, that the movements are unconsciously consolidated and perfected apart from our repetition of them. So that when we begin again we are better than when we left off.

[1] Isaac Taylor, *Home Education*, pp. 222, 223.

CHAPTER XV.

THE UNCONSCIOUS MIND AND THE MUSCULAR SYSTEM.

General action of mind on muscle.

The connection of unconscious mind action with the muscular system, like all other details of the relations of the unconscious mind with the various systems and organs of the body, will, ere long, we are convinced, become a favourite subject for study and research, bearing as it does so directly and profoundly upon the whole question of the cause and cure of many diseases. It is obvious, however, that before this is done the fact of such relations, nay more, of the very existence of the unconscious mind, must be firmly established, clearly proved, and generally accepted amongst scientific men. It is this which is the primary object of this work, to establish and prove by means of the weighty and emphatic testimony brought to bear upon the question from many sources. In speaking, therefore, of the relations of the unconscious mind with the various organs and tissues of the body, no more will be attempted here than to seek generally to establish the fact, and point out the consequences flowing from it as briefly as possible.

In touching here on the muscular system, we will first of all give some evidence as to mind action gener-

ally on muscle, then as to voluntary and involuntary actions, and then of the action of the unconscious mind on muscles.

Muscle action never merely mechanical.

Huxley and others take the, to us, untenable position that—"All acts which take place unconsciously are reflex, and all reflex actions are the operation of a non-sentient mechanism. They are, therefore, as purely mechanical as those of automata."

We think we have already disproved this in the chapter on habit (chap. vi.). We will give further objections to this mechanical view of reflex action now. To believe with Herbert Spencer[1] that actions that become automatic by frequent repetition cease to be psychical and become physical would lead to the conclusion that when a doctor by laborious study and incessant practice recognises disease intuitively (*i.e.*, by unconscious mind action), he does so by a mechanical and not a mental act; the mental act being allowed to be the quality of the bungling though conscious attempts of the tyro to recognise the same disease. Further—

"The varying tone of muscles enters as a factor in the general state of sentience, though rarely discriminated consciously."[2]

And "All habitual actions are the actions of a reflex mechanism, and all *are sentient* even when unconscious. They are, therefore, never purely mechanical, but always organic" (*psychical*).[3]

[1] Herbert Spencer, *Principles of Psychology*, vol. i., p. 499.
[2] G. H. Lewes, *Brain*, vol. i., p. 28.
[3] *Ibid.*

"The conception that muscular power is derived from the combustion of food ingredients *alone*, is altogether unphysiological and functionally erroneous. The contraction of a muscle is a purely mechanical event, but the atomic process on which it is dependent is by no means itself a mechanical event. The power of muscle rests entirely on its evolutionary ingrained affinities, and not on the burning of any transient material."[1]

It is a thankless task to try to explain what another man means by what he says, but the language of the above is rather obscure. As far as the writer can understand it, Professor Montgomery appears rightly to admit the actual muscle contraction is a mechanical (or shall we say, chemical?) event; and would probably also admit that the passage of the exciting current is also a mechanical or, at any rate, physical process; but that the sending of this current and the determination of its force is altogether a psychical event, and depends on other than material agencies. Carpenter observes:—

"There is strong reason to believe the cerebrum has no communication with the external world, otherwise than by its connection with sensori-motor apparatus, and that even the movements called involuntary are only so as regarded their original source; the stimulus which immediately calls the muscles into contraction being supplied from the automatic centres".

Dr. C. Féré (Salpetrière Hospital) gives a remarkable connection of muscular power with mind.

[1] Prof. Ed. Montgomery in *Mind*.

"At the moment of intellectual activity," he says, "there is a momentary increase of voluntary power of movement."[1]

Mental activity increases muscular power.

Johannes Müller, 1838, says: "The idea of a particular motion determines a current of nerve action towards the necessary muscles, and gives rise to a motion independent of the will".

Voluntary muscle action can be made to overcome involuntary or unconscious action.

"A woman who was troubled by wryneck had always in her power to prevent it, by contracting the muscles of the opposite side when she recollected to do so. A good illustration of the same power occurs when we are able to overcome cramp of the calf by the vigorous exertion of the will to extend the muscles in spite of powerful reflex action to the contrary."[2]

"If a given movement is to follow a given signal, the movement would frequently be made by the person, even when the actual signal is withheld."[3]

The definite education of the muscles by the will—as in training, learning trades, violin, piano, etc.—illustrates in various ways the power of mind over muscle.

Now, as to the voluntary and involuntary movements of the muscles:—

Voluntary and involuntary muscle movement.

"There is no real and essential difference between voluntary and involuntary actions. They all spring from sensibility. They are all deter-

[1] C. Féré, *Brain*, vol. viii., p. 212.
[2] Hack Tuke, *Mind and Body*, vol. ii., p. 161.
[3] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. iii., p. 277.

mined by feeling. It is convenient to designate some actions as voluntary, but this is merely a convenience: no psychical or physiological insight is gained by it." [1]

"While all the muscles can be influenced by the emotions, only the voluntary muscles can be influenced by the will." [2]

This is a very interesting and, we think, accurate distinction between striped and unstriped muscle. It would appear that the reason is because emotions (unconsciously) can influence the sympathetic *and* the cerebro-spinal nervous systems, whereas our wills (consciously) can only affect the cerebro-spinal; or, in other words, that messages from the unconscious mind are conveyed by all the nerves; those from the conscious mind by the cerebro-spinal nerves alone.

"The reflex action of an ideational nerve current is downwards upon the motor centres, and there gives rise to what has been called *ideo-motor* movement. The energy may be excited either upon the involuntary or upon the voluntary muscles; in the latter case (only) taking place either with consciousness or without consciousness." [3]

Simultaneous conscious and unconscious action on muscle.

Professor Binet shows that in health, by careful observation, the rudiment of states of double consciousness, clearly seen in mediums, etc., can be perceived, and that if a person is set to do two dissimilar things, as adding a sum and squeezing with one hand an india-rubber tube

[1] G. H. Lewes, *Physical Basis of Mind*, p. 373.
[2] Hack Tuke, *Mind and Body*, vol. ii., p. 2.
[3] Maudsley, *Physiology of Mind*, p. 287.

rhythmically (voluntarily), or allowed with the other hand to make curls or circles on paper with a pencil (involuntarily), the more the person attends to the sum the greater the irregularity and difficulty of carrying on any voluntary movement, but the easier the involuntary ones.[1] This is an interesting experiment, but it seems the voluntary and involuntary occupations for the two hands are not well chosen; the one is too little intelligent, and the other not quite involuntary.

The voluntary action should be an unaccustomed, unrepeated action, not a sequence of exactly the same movements which soon become semi-conscious.

"The energy of a movement corresponds with the intensity of its mental representation. Movement is strengthened according to this by intellectual effort. There is a tendency to equalise right and left movements. The ordinary flexion power of a woman in the right hand is twenty-three kilos, in the left fifteen. With strong intellectual effort, this force can be raised to forty-one kilos for the right and thirty-six for the left. Protracted mental labour diminishes muscular force; pleasure, such as a nice smell, augments muscular power; pain, as a disagreeable smell, diminishes it."[2]

Voluntary fixed position of the body is much harder to maintain than involuntary. In *tableaux vivants* it is almost impossible to keep from moving for more than

[1] Prof. Binet, *Mind*, vol. xv., p. 53.
[2] Féré, *Brain*, vol. viii., p. 212. My own observations are that the left is nearly always about 5 kilos stronger than the right.

three of four minutes. On the other hand, in listening to an eloquent address, the body easily remains motionless for a much longer period.

"A person strongly imagining a kick, can hardly refrain from it. The intimacy of the alliance between mind and the nervous system is here clearly seen. Blushing, blanching, etc., are other instances." [1]

Unconscious co-ordination in erect position.

Many so-called voluntary acts are highly complicated involuntary reflex acts. The erect position is, to a certain extent, voluntarily assumed; but is wholly unconsciously maintained, through the most complex co-ordination of hundreds of muscles, controlled and regulated by the unconscious mind, in response to afferent currents brought by the special and ordinary sensations.

Some may assert that the action of the cerebellum which governs the co-ordinate movements of equilibrium is essentially physical in character, simply on the assumption that all true reflex action is physical and not psychical. This we have already controverted. We may now add: "The co-ordination of the cerebellum, *e.g.*, as in a dog running by a carriage, jumping in and out of the horses' feet, etc., is all unconscious. All such facts appear to denote an unconscious intelligence seated in the organism." [2]

The balance on a bicycle is a good illustration of acquired co-ordination by the formation of habit, at first by conscious effort (then admittedly psychical),

[1] A. Bain, *Mind and Body*, p. 90.

[2] Ribot, *Heredity*, p. 225.

afterwards by unconscious co-ordination (and then no less psychical).

Psychic nature of reflex action.

In further proof of the psychic nature of reflex actions. If a frog is touched with acid in various parts both with and without its head, its action is the same, the foot will follow the part touched all over the body. This action is hardly that of a machine. It is a movement adapted to a special end, and may never have been exactly performed before. These are characteristics of intelligence and will and a choice of means. We have in the reflex act all that constitutes the psychological except consciousness.

The movements with the whole medulla and sensorium left are in many animals—pigeons, *etc.*—more intelligent than with the medulla only, showing unconscious special and other sensations by which they are directed.

When we walk unconsciously (reflexly), the sensibility of the sole of the foot is a primary condition. There is therefore proved sentience when we are unconscious of it.

In executing a voluntary movement, such as lifting objects of known weight and resistance, we unconsciously regulate our muscular force to them, so that if we are deceived, as by a ball of cork painted to imitate a cannon ball, the adjustment formed by our unconscious mind from memory and apperception is clearly shown. The same is seen in going up and down stairs when the imagining of a step more or less gives a great jar to the body through erroneous unconscious adjustment.

"A person climbs a hill near the house of his childhood and finds it insignificant to what he thought it. To his childish muscles the climbing was most fatiguing. The man remembers these feelings and 'unconsciously reasoning' by past experience imagined the hill higher than it was."[1]

Unconscious muscular action.

"These impressions of the muscular sense are unconscious impressions. We may regard it as established that even the slightest movement, whether due to conscious or unconscious volition, presupposes the unconscious idea of the appropriate central nerve ending, and the unconscious will to stimulate the same."[2]

"We have already seen that any muscular movement is explicable only by the repeated intervention of unconscious volition and thought."[3]

"Even the simplest motor elements accessible to the cerebral consciousness still require highly complicated combinations of movement for their execution, into which consciousness never penetrates."[4]

To resume. All mannerisms, contortions, twitchings, pulling faces, are, as a rule, unconscious actions of the mind on the body.

"The writing out of thoughts of which the mind is not conscious as there present, furnishes another example of unconscious cerebration."[5]

[1] Sully, *Illusions*, p. 269.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 78.
[3] *Ibid.*, p. 169.
[4] *Ibid.*, p. 135.
[5] Dr. G. Thompson, *System of Psychology*, p. 430.

"The character of a man's will is written on his physiognomy and the muscular habit of his body; as evidence there has been an habitual muscular tension during each operation of will."[1]

The idea of yawning or the sight of it, produces it involuntarily, by the ideo-motor as sensori-motor centre of Carpenter.

"The skin contracts involuntarily (goose flesh) from fear, showing the action of the mind on unstriped muscle; as does also the dilation of the pupil from fear, as seen in dogs as well."[2]

In sleep the mind acts on the muscles unconsciously, as in sleep-walking. A ballet dancer, quoted by Dr. Chambard, asleep, if told authoritatively to dance, began to do so.

Muscular action in sleep.

The hands of the button-makers in Birmingham, already mentioned before, are unconsciously moving as if making buttons as they walk through the streets at meal times.

"Can there be a more certain proof," says Hume, after quoting instances of the unconscious action of mind on muscle, "that the power by which the whole operation of motion is performed, so far from being directly and fully known by consciousness, is to the last degree mysterious and unintelligible?"[3]

The imagination of anything causes unconsciously

[1] Maudsley, *Physiology of Mind*, p. 316.
[2] Hack Tuke, *Mind and Body*.
[3] Hume, *Inquiry Concerning the Human Understanding*, edited by Selby Bigge, 1894, p. 66.

bodily changes. "A lively remembrance of a pleasant relish will produce the same expression of countenance and the very smack of the reality."[1]

If a person says something ridiculous, you may smile or frown or look sceptical, even in the dark, though your face cannot be seen.

Curiosities in conscious and unconscious muscle action.

"A philosopher walking in a crowded street may be so completely engrossed with thought that, although he threads his way successfully (unconsciously) through the crowd, he is not conscious of anything around, and can neither recognise friends nor will he come into collision with others or with the lamp-posts.'[2] That is to say, the conscious and unconscious minds, so far from acting together, act quite apart, as we have already seen; the action of the unconscious becomes always most apparent when the conscious is in abeyance. Here, though the whole of the man's conscious mind is so absorbed that he cannot use it on any passing object, the unconscious mind is quite free to regulate his steps and watch over his safety.

In taking down shorthand notes, my secretary finds she can correctly report an address without having any clear idea as to the substance of it.

F. W. H. Myers, in the *Journal of the Psychical Research Society*, tells a story of a Mrs. E. K. Elliot, who received some letters by post, one of which contained £15 in bank notes. She went into the kitchen

[1] A. Bain, *Mind and Body*, 3rd edition, p. 90.
[2] Carpenter, *Mind and Body*.

and made a motion to throw the letters (as done with) into the fire, "when," she says, "I distinctly felt my hand arrested in the act, as though another hand was gently forcing it back. Much surprised, I looked at my hand and saw it contained the bank notes. I was so surprised I called out, 'Who is here?' I called the cook and told her and also my husband." The Rev. E. K. Elliot says: "I remember my wife describing the above adventure to me at the time, and also that she was nearly fainting from the excitement caused by it".

Personally, I am not aware of being vain, and seldom wear any jewellery; but of late years I have worn a signet ring on the little finger of the right hand; and I have constantly noticed, with annoyance, a great tendency in that hand always to be uppermost, folded over the other, and generally more conspicuous. I lost the ring a year ago and since then have worn another on the little finger of my left hand, hoping as this hand was less in sight I should not look as if I were showing it off. But to my disgust, my left hand has quite unconsciously to me, and against my will, now got the trick of folding over the other, and coming uppermost, and generally making itself observed.

Power of expectation in involuntary muscle action.

Lord Bacon points out that if we hold a ring by a thread in a narrow glass, and expect it to strike so many times (as when knowing the hour we expect it to strike it) against the side, it will do so.

The expectation of a movement causes our voluntary muscles to act unconsciously. But it is a curious thing

that this motion is often arrested by the eyes being closed; the guiding sensation of sight being helpful, if not essential even to motion when the will is in abeyance.

Thought readers find the object that is hidden by the muscles of the subject's hands tightening or relaxing as he approaches or recedes from the article; not only so, but the pulse is felt to quicken and the hand to perspire as he approaches the object.

Here we get the unconscious action of conscious muscles.

Dr. Tuke tells us of a woman who, hearing her husband had a bad accident, got a severe attack of rheumatism in wrists and ankles, and could not move either.

The emotions can affect both voluntary and involuntary muscles; for instance, "the arm of a man affected with paralysis, which no effect of his own will could move, has been seen to be violently jerked by emotion at the sight of a friend".[1]

"The superhuman strength with which the body seems endowed under the influences of an overwhelming emotion is well known."[2]

"No motor power can be excited through the sympathetic system by any sort of will; but it can be greatly affected by emotional states, particularly in the case of the heart and arteries."[3]

The mind can inhibit muscle action without causing disease. A gentleman endeavouring to take off his

[1] W. B. Carpenter, *Mental Physiology*, 4th edition.
[2] *Ibid.*, 3rd edition, p. 326. [3] *Ibid.*, p. 127.

coat was two hours before he could do it, being unable to exercise his will power. On another occasion he could not take a glass of water off a tray, and kept the servant standing before him half an hour before he could do it. We all know that some are half an hour before they can induce their muscles to swallow a pill, or to take a great jump, or make other unwonted efforts.

Conscious and unconscious muscle inhibition.

Table turning is a capital instance of involuntary movement of voluntary muscles.

"The muscular power becomes greater in public competition and often in the presence of one of the opposite sex."[1]

Lastly, I give an instance of how the conscious mind actually inhibits the action of the unconscious or the muscles. There is a certain air which I have been able to play from memory for over thirty years if I abstract my mind from the piano and just put my fingers on the notes and play away. If I look at the notes or try to play even the next chord of the air, it is impossible. If I play a note wrong, I cannot proceed, but must begin again from the beginning. Consciously it is impossible to play it; unconsciously, just letting myself go, I get through all right.

[1] Féré, *Brain*, vol. viii., p. 212.

CHAPTER XVI.

THE UNCONSCIOUS MIND AND ITS ACTION ON THE HEART, LUNGS, SKIN, STOMACH; AND IN SEX AND REPRODUCTION.

We must again point out that the extreme brevity with which we touch on the relation of the mind to these important organs which we consider in this chapter is due to the fact that its chief action is seen in connection with definite disorders and cures; and that inasmuch as the whole question of the relation of unconscious mind with disease and therapeutics is treated elsewhere, we do no more than barely allude to the subject now.

First, then, let us consider the action (unconsciously) of the mind on the heart and circulation.

Action of unconscious mind on the heart.

Gliddon points out that the heart is so affected by the emotions that it is often called their seat. We speak of a cordial welcome, of heart-rending accounts, of hearty sympathy, of kind-hearted people, of hard-hearted people.

A man about to be beheaded was reprieved before the axe fell after his head was on the block, but he had died (heart failure) from fright.

"Pleasurable emotion gives firmness and regularity to the action of the heart, promotes the circulation of

the blood, increases the gastric secretions, and imparts firmness and regularity to the muscular contractions of the stomach."[1]

Dr. Leith in his lectures in 1896 on pathology in Edinburgh was "inclined to doubt whether the benefits of Nauheim (a treatment for the heart) were not after all to be explained largely, if not entirely, by the influence of the mental factor".[2] Personally, we think this is only very partially true.

Malebranche took up Descartes' treatise *De l'homme* and it caused such a violent beating of the heart by its wonderful power that he was obliged to lay it aside to breathe freely.

"John Hunter says he was subject to spasm of his 'vital parts' when anxious about any event; as, for instance, whether bees would swarm or not, whether the large cat he was anxious to kill would get away before he could get the gun. After death, however, it was found he had some heart disease."[3]

Joy increases the palpitation of the heart by increased "vital" action, terror does the same in another way. As a general principle, pleasurable emotions increase the vital functions, and painful ones depress them.

The action of the heart is greatly affected by emotions through the sympathetic system; it is quickened or slowed or even stopped by mental shock through the tenth nerve. The movements of the heart are altered,

[1] Hack Tuke, *Mind and Body*. [2] *British Medical Journal*, 1896, p. 711.
[3] Hack Tuke, *Mind and Body*.

and peculiarities of the beat are exaggerated, when attention is closely fixed upon it. There is little evidence, however, that mind can produce more than functional disturbance of the heart.

"Lord Eglinton told John Hunter how, when two soldiers were condemned to be shot, it was arranged the one who threw the number with the dice should be reprieved; the one who proved successful generally fainted, while the one to be shot remained calm." [1]

"I have never met," says Richardson, "with a case of intermittent pulse that was not due to some mental cause—shock, fear, sorrow, etc." [2]

Action of unconscious mind on circulation.

During the rush of consumptives to Berlin for inoculation by Dr. Koch's tuberculin, a special set of symptoms were observed to follow the injection and were taken as being diagnostic of the existence of tuberculosis; amongst others, a rise of temperature after so many hours. These phenomena were eagerly looked for by the patients, and occurred accurately in several who were injected with pure water.

The formation of blisters full of serum from the application of plain stamp and other paper to various parts of the bodies of patients in the hypnotic state, is well attested and undoubtedly true.

"Dr. R. von Krafft-Ebing has produced a rise from 37° C. to 38·5° C. in a patient whose mind was fixed by

[1] Hack Tuke, *Mind and Body*.
[2] Sir B. W. Richardson, *Discourses*, p. 16.

suggestion, and Dr. Binet has lowered the temperature of the hand 10° C. 'How can it be,' he asks, 'when one merely says to the subject, "your hand will become cold," and the vaso-motor system answers by constricting the artery? *C'est ce que depasse notre imagination.*'"[1]

Indeed there is no way of accounting for such a phenomena but by freely admitting the presence of unconscious psychic forces in the body, capable of so influencing the structures of the body as to produce physical changes.

Unconscious mind and blushing.

"It is believed that no animals can blush; children of three years old can. The limits of blushing rarely extend as low as the clavicles in front and the scapulæ behind; but one instance is recorded of the whole body blushing from shame."[2] The other day I had a nerve patient whose heart I wished to examine. As she uncovered the chest I perceived a scarlet rash extending as low as the middle of the bosom. I found that she habitually blushed to this level.

"We must remember there are two circulations, the cardiac and the capillary, the former controlled by the heart, the latter directly by the nervous system,"[3] and it is the latter that is affected in blushing.

Pain and inflammation from psychic causes.

"A lady saw a child in immediate danger of having its ankle crushed by an iron gate. She was greatly agitated, but could not move, owing to intense pain coming on in her

[1] *Proceedings of Psychical Research Society*, vol. vii., p. 337.
[2] Hack Tuke, *Mind and Body*.
[3] *Ibid*.

corresponding ankle. She walked home with difficulty, took off her stocking and found a circle around the ankle of a light red colour, with a large red spot on the outer side. By the morning her whole foot was inflamed, and she had to remain in bed for some days."

"A young woman witnessing the lancing of an abscess in the axilla immediately felt pain in that region, followed by inflammation. Dr. Marmise of Bordeaux tells us of a lady's-maid who, when the surgeon put his lancet into her mistress's arm to bleed her, felt the prick in her own arm, and shortly after there appeared a bruise at the spot." [1]

Stigmata.

St. Francis d'Assisi meditated so long upon the Crucifixion that he suffered severe pain in his hands and feet, succeeded by inflammation that terminated in ulceration.

Louise Lateau bled profusely in her hands and feet, although, on examination of the skin with a strong lens, no scratch whatever could be found. The papillæ of the skin, however, were red and swollen.

"It is not so well known, but it is nevertheless the fact, that utterly startling physiological changes can be produced in a hypnotised subject merely by conscious or unconscious mental suggestion. Thus a red scar or a painful burn, or even a figure of a definite shape, such as a cross or an initial, can be caused to appear on the body of the entranced subject solely through suggesting

[1] Hack Tuke, *Mind and Body*.

the idea. By creating some local disturbance of the blood-vessels in the skin, the unconscious self has done what it would be impossible for the conscious self to perform. And so in the well-attested cases of stigmata, where a close resemblance to the wounds on the body of the crucified Saviour appears on the body of the ecstatic. This is a case of unconscious *self*-suggestion, arising from the intent and adoring gaze of the ecstatic upon the bleeding figure on the crucifix. With the abeyance of the conscious self, the hidden powers emerge, whilst the trance and mimicry of the wounds are strictly parallel to the experimental cases previously referred to. May not some of the well-known cases of mimicry in animal life originate, like the stigmata, in a reflex action, as physiologists would say, below the level of consciousness, created by a predominant impression analogous to those producing the stigmata? That is to say, to reflex actions excited by an unconscious suggestion derived from the environment; in other words, the dynamic, externalising power of thought, if the action of that which is unconscious may be called thought. We must, in fact, extend our idea of 'thought' to something much wider than intellection or ideation—these are special acts of thought, for the directing functional activity of our sub-liminal life has also the attributes of thought though we may be unconscious of its thinking." [1]

Extended meaning of "thought".

We will now turn to the lungs and respiration.

[1] Prof. Barrett (Prof. Physics, T.C.D.), in the *Humanitarian*, 1895.

The unconscious mind and respiration.

There are two centres for respiration, the one strictly a natural reflex on the medulla, the other connected with the cortex and consciousness. The breath can be altered in rhythm and force, etc., by the mind consciously and unconsciously, but only within the limits fixed by the automatic centre, *i.e.*, not so as to endanger life.

The will can produce a cough, but not a sneeze. Hysterical (or mind) cough, and dyspnœa or short breath are well known. One cannot breathe naturally when the action is brought into full consciousness. When a patient is told to breathe naturally, and tries hard to do so, the results are often ludicrous.

Emotions produce a feeling of suffocation, and the rising of a ball (*globus*) in the throat.

The breath is altered by the emotions. The short quiet breath of joy contrasts with the long sigh of relief after breathless suspense. Joy gives eupnæa or easy breathing, grief or rather fear tends to dyspnœa or difficult breathing. Sobbing goes with grief, laughter with joy, and one often merges into the other. Yawning is produced by pure idea or by seeing it, as well as by fatigue.

Dr. Morton Prince says a lady he knew always had violent catarrh in the nose (hay fever) if a rose was in the room. He gave her an artificial one and the usual symptoms followed. He then showed her it was a false one, and had no pollen, etc., and ever after all symptoms disappeared.[1] How many cases of hay fever

[1] *Journal of Nervous and Mental Diseases* (Boston), May, 1891.

have a somewhat similar origin in the unconscious mind!

"A sanguine mind is proverbially associated with phthisis, and hope and joy exert a marked influence over the respiration." [1] Respiration is almost suspended in strong intellectual work. We both see and hear best when not breathing.

With regard to the skin and hair.

Action of mind on skin and hair.

Blushing and various sorts of more permanent erythemas are common from emotion. Mucous membrane can change into epithelium if it is necessitated by abnormal circumstances to form an external surface, as in a prolapsed uterus.[2]

"Very remarkable is the formation of excreting passages answering the purpose when certain morbid products in the interior of a structure have no natural vent; and unless such were formed would destroy the organ. This is the case in all fistulæ; cellular tissue being converted into the walls of the passage, and into a mucous membrane insentient to the particular matter carried out. They cannot possibly be healed over so long as the natural outlet is not restored, but then they heal of themselves quickly and easily." [3]

Professor Gregory makes a man in an hypnotic state feel so hot he perspires profusely, or so cold his hands are numb.

Drawing a magnet upwards near an arm used to be

[1] Hack Tuke, *Mind and Body*, vol. ii., p. 130.
[2] Ed. v. Hartmann, *Philosophy of the Unconscious*, p. 154.
[3] *Ibid.*, p. 155.

thought to develop the "Od" force, and various pricking sensations were felt, while in drawing it downwards a different set of symptoms occurred. Dr. Braid did this with the patient's arm behind a screen, and all the sensations were felt; but then they were felt the same when there was no magnet.

The hair may be turned grey and white by emotion in a few hours or sooner.

Action of mind on digestive organs.

With regard to the stomach and digestion, apart from actual disease, we may notice one or two instances of unconscious mind action.

"A man who was very sea-sick lost a valuable set of artificial teeth overboard, and was instantly cured."

If the thoughts are strongly directed to the intestinal canal, as by bread pills, it will produce strong peristaltic action. Vomiting occurs from mental causes, apart from organic brain disease. Bad news will produce nausea; emotion also, or seeing another person vomit, or certain smells or ideas, or thoughts about a sea voyage, etc., or the thought that an emetic has been taken.

The thought of food produces a copious flow of gastric juice in the stomach and saliva in the mouth.

Hysterical (*i.e.*, mental) dyspepsia, eructation, vomiting and gastralgia are all common.

"Jaundice has been caused by fits of anger and fear. A medical student had an attack brought on by a severe examination." [1]

[1] Hack Tuke, *Mind and Body*.

I directed a baby to be fed every two hours by day and every four hours by night by the clock; and six weeks after the baby woke naturally at night within five minutes of the time.

The thought of an acid fruit will fill the mouth with water. A successful way of stopping discordant street music is to suck a lemon within full view of a German band. Fear will so dry the throat that dry rice cannot be swallowed. This is a test in India for the detection of a murderer. The suspected man is brought forward and given a handful of dry rice to swallow. If he can do this he is innocent; if he cannot he is guilty, fear having dried up his mouth.

Vomiting (natural) in cases of poisoning is not always from stomach irritation. In some cases it is the result of a protective mechanism. Similarly we get loss of appetite in bilious attacks.

Dr. Murchison says there is good evidence that nerve influence may not only cause functional derangement, but also cure structural disease of the liver.

A young lady who could not be cured of vomiting was engaged to be married. On being told that the wedding day must be postponed till cured, the vomiting ceased.

Sir James Paget tells us of very severe parotitis or inflammation of the salivary gland occurring in a man of sixty-nine from the sight of acid food. (When a boy he was always upset at the sight of vinegar.) [1]

[1] Sir James Paget, *Studies from an Old Case-book*, p. 109.

Persistent dry mouth after mental shock is recorded by Jonathan Hutchinson in 1888.

Sir Thomas Watson records a case of jaundice occurring in an unmarried woman when she discovered she was with child.

We will now touch briefly on the connection of the unconscious mind with sex and reproduction.

Action of mind on sex in early life.

The whole differing characteristics of manner, habits, tastes and mind of man and woman rise largely from the unconscious part of the mind, and their whole beauty consists in their unconscious origin.

In the different games and occupations of boys and girls we see this developing even from the nursery, as in the marked love for dolls amongst girls, the habit of kissing, the development of modesty and the love of dress, all of which are different in degree or lacking amongst boys.

The feeling of shame exists utterly unconsciously in many savages, and is instinctive in all pregnant women.

Laura Bird, a blind, deaf and dumb little girl of excessive modesty, kissed a man by mistake, and ran away in great fright. She would not undress a doll if there was a man in the room.

It is remarkable how modesty increases unconsciously at puberty. Kissing boys, common before, ceases now; and this not by precept, but by instinct. We see unconscious love or sexual selection in animals. A dog will follow another for miles, passing and neglecting all

others ; so in the pairing of seals, there is distinct selection and preference.

"Facts connected with the dawning of sexual life might of themselves suffice to teach psychologists, if they would condescend to them, how far more fundamental than any conscious states is the unconscious mental life."[1]

"Even the passion of (conscious) love has its source in the unconscious life."[2]

Conscious love has an unconscious source.

"The unconscious instinct of love between two definite people provides for the constitution of succeeding generations for the ideal of the human race, *i.e.*, for the ennoblement of the species. Individuals excite greater sexual charm the more completely they represent corporeally and mentally the idea of the race and the more nearly they approach the acme of the procreative power (in women, eighteen to twenty-eight; in men, twenty-four to thirty-six); secondly, that individual has the greatest sexual charm for any other individual that as far as possible neutralises the latter's defects by opposite defects; thus producing a child which represents the type of the race in the greatest possible perfection."[3]

"The instincts in sexual life are deeper and profounder than mere pleasure. This only appears in the higher animals, where consciousness (without this added feeling) might thwart the unconscious instinct (for the continuance of the race)."[4]

[1] Maudsley, *Physiology of Mind*, p. 356. [2] *Ibid.*, p. 377.
[3] Schopenhauer, *Welt als Wille*, vol. ii., p. 44.
[4] Ed. v. Hartmann, *The Philosophy of the Unconscious*, vol. i., p. 223.

The strength of this unconscious instinct depends on its psychical and not its physical source, for these often vary in inverse ratio; the former often intensifying as the latter weakens.

"Monogamy is instinctive with women, polygamy with men; hence, where man rules, polygamy is common; where woman has her rights, monogamy. A man can be father to 100 children in a year, a woman can only bear one, hence the difference of natural instinct." [1]

Now as to the phenomena of reproduction.

We notice the whole character of woman instinct with unconscious mental qualities of altruism, love, compassion, unwearying patience, all formed by generations of maternity.

Action of mind in uterine development.

Then as regards offspring: "There is no physical cause discovered why ova should develop according to their kind. To talk of a law impressed on matter is to use mere words. How can a law be impressed on matter? As a seal or wax? Or as the polar arrangements of parts in a solid? If so, it is discernible by the microscope, and then it would not be a law but a phenomenon.

"I am indeed inclined to regard the development of an ovum according to kind as the result of a strictly immaterial and spiritual agency." [2]

Though the writer of the above was no psychologist he was a scientific man and an acute thinker, and we

[1] Ed. v. Hartmann, *The Philosophy of the Unconscious*, vol. i., p. 224.
[2] Charles Kingsley, *Life*, vol. ii., p. 147.

believe that now there are comparatively few that will deny the psychic causes at work. It has been beautifully said "an organised being is the product of the unconscious memory of an organism".

Herbert Spencer says: "It is proved that no germ, animal or vegetable, contains the slightest rudiment, trace, or indication of the future organism—since the microscope has shown us that the first process set up in every fertilised germ is a process of repeated spontaneous fissure ending in the production of a mass of cells, not one of which exhibits any special character".

Surely stronger evidence could not be given in favour of Kingsley's belief.

A mother nursing her child always found the milk secreted when she heard the child crying for any length of time.

Fear stops the secretion of milk, and worry will entirely change its character, so as to become absolutely injurious to the child. The idea of beauty attaching to the outline of the female bust is probably due at the bottom to the unconscious idea of its value in the sustenance of the race, rather than merely to the quality of its curves and lines.

In conclusion, we will give some evidence as to the way in which the mind of the mother can unconsciously impress physical characteristics on the offspring.

Dr. Lowe, in the *British Medical Journal*, says that the lasting effects of pairing in animals, both in the male and female, are to his mind conclusive. He

only selects about half a dozen experiments, which speak for themselves.

Physical characteristics from psychic causes.

1. He says that a white sow with a black Berkshire boar produced a litter of black and white pigs. This sow next, with a red Tamworth boar, although there was no black in either of the parents, produced a progeny which were red, black, and white, the patches of black being very conspicuous.

2. A black sow and boar (Duckering breed) had always bred their progeny black. The boar then was put with a white sow for the first time; two months later it was back with the original black sow, which then produced a litter of black and white pigs, although there was no white in either of the parents.

3. A shorthorn cow with an Alderney bull produced a calf which was half-bred Alderney. Afterwards, this same cow, with a shorthorn bull, had another calf, which was still partly Alderney.

4. A smooth fox-terrier, by a rough Scotch-terrier, had rough pups. Afterwards, by a smooth fox-terrier, it had pups which were, many of them, rough-coated, and none were like the parents.

5. A Manx tailless tom-cat paired with an ordinary English cat, and a portion of the kittens had either no tails or very short ones. The tailless tom-cat died some years ago, but up to the present time a few tailless kittens are still born.

6. A fair light-haired Englishman married a Brazilian lady, but had no children. Twenty years after he married a light-haired English lady, who subsequently had

a dark-haired son who was more Brazilian in appearance than English.

Dr. Lowe can give numbers of different cases of cows, cats, pigs, rabbits, sheep, etc., but thinks these examples will sufficiently illustrate this phenomenon.[1]

Case No. 6 is alluded to as follows in the next issue by Dr. Neale:—

"The solution to this problem appears to me 'psychological imprint'; that, having been deeply attached to his Brazilian wife, and having dwelt lovingly upon her memory for twenty years, the resulting offspring from his 'fair English wife' bore the traces of long-continued mental impressions rather than the result of merely having lived many years previously with a lady of a darker hue".

A thoughtful study of these cases will leave the reader with the profound conviction that the cause is undoubtedly psychical and not physical.

Action of mind on maternal impressions.

The effects of pre-natal impressions on the offspring, of which there seems undeniable evidence, also afford a striking illustration of the influence of suggestion. "The story of Jacob getting Laban's flock to breed striped cattle by means of suggestion (Gen. xxx.), testifies to the antiquity of a belief which seems less incredible as our knowledge extends."[2]

The mother of Charles Kingsley believed that impressions made on her own mind before the birth of

[1] E. J. Lowe, F.R.S., in *British Medical Journal*, 31st October, 1896.
[2] Prof. Barrett (Dublin), *Humanitarian*.

the child for whose coming she longed would be mysteriously transmitted to him; and in this faith, for his sake as well as her own, she luxuriated in the romantic surroundings of her Devonshire home and in every sight and sound which she hoped would be dear to her child in after life. These hopes were realised; and though her son left Devon when he was six weeks old, and never saw his birth-place till he was a man of thirty, it and every Devonshire scene had a mysterious charm for him throughout life.[1]

[1] Charles Kingsley, *Life*, vol. i., p. 4.

CHAPTER XVII.

THE UNCONSCIOUS MIND AND DISEASE.

We now turn to the bearing of the unconscious mind on disease, and here we would again remark that the simple word "mind" would, in the author's opinion, be much better than the cumbersome terms "conscious mind" and "unconscious mind" we have had to use so frequently; the qualification used "consciously" or "unconsciously" being added as needed, thus emphasising the unity of the mind.

The mind is one, conscious or unconscious.

For after all we think we have shown that the "ego" —that is, ourselves—lies far more in the unconscious than the conscious. We are, however, in this work at any rate, compelled to reiterate the formula "the unconscious mind" with almost wearisome frequency, because it is the very point we have to prove; and cannot therefore assume that "mind" alone would be understood equally to refer to "conscious" or "unconscious" according to the context. If any prefer the alternative formula "mind used unconsciously," let them substitute it throughout. We avoid it for the extraordinary reason that there are not wanting psychologists who would understand the phrase to

mean "mind," *i.e.*, "*conscious* mind" used "*un*consciously".

With this explanation we turn to our subject.

Opposition to mental therapeutics.

The advance of medicine, like all else, is rather of the order of the motion of a switchback car; progressing undoubtedly, but with quite an uncomfortable amount of oscillation; deriving, indeed, its motive power partly from the ups and downs which so lengthen its journey, rather than entirely from any steady and inherent driving force.

In the dark ages of medicine before the invention of instruments and consequently methods of precision, much greater regard was given, though blindly enough, to the psychic factor in disease than now.

The discoveries in histology, animal chemistry, bacteriology, etc., and the exquisite instruments used in diagnosis, have so dazzled the eye and filled the mind with the physical factor in disease that the psychic is well-nigh forgotten, and any reference to it received with scarcely concealed impatience or contempt.

When we can actually see the bacillus tuberculosis, surely it seems waste of time to drivel about the patients' spirits; when the enteric ulcer is laid bare in the pathological theatre, and the very site of the perforation in evidence, what nonsense to talk of mind influence in typhoid; when we can catch and stain, and double stain the cholera "comma," how worse than feeble it appears to talk of fear as a factor.

The reason of the impatience felt when psychic causes are spoken of to the skilled experimentalist is

instructive. Is it not because he knows this is something which even his instruments can neither measure nor weigh? He knows that if it is allowed a hearing, it will distract attention from exact experiment, which now holds the field; and introduce another factor that must be dealt with by other methods.

The ordinary physician has yet another, and indeed a better grounded reason for dislike and indifference, and his generally agnostic attitude, and it is this:—

Quacks and their cures.

One of the most extraordinary paradoxes of to-day lies in the fact that, simultaneously with an advance in scientific medicine wholly unparalleled in the world's history, there is on every side a quackery that flourishes and triumphs as much as, or more than, in the darkest of the dark ages.

It is the general rule that as the true light shines the darkness disappears. It is not so here. Nor can it be said that it is in the lesser civilised parts of the earth, where scientific medicine is rare, that most quacks are found. The reverse, strange to say, obtains. It is in America, and the most enlightened parts of America; it is in England, and in the heart of its most intelligent centres, that quackery flourishes; and we now speak of quackery pure and simple.

Only last year (1897) there was started most successfully in London a system of curing, not one or two, but all diseases by little bottles of medicine (so called) sold across the counter by any chemist, the diagnosis being made by the sufferer!

But, from the doctor's standpoint, worse still remains.

Quackery would soon come to an end and fade away before the spread of knowledge, and the decay of superstition, under the fostering care of the School Board and the higher educational system, but for one thing. It can show real cures, both undeniable and numerous, in spite of the vast number that may not bear scrutiny.

Quacks effect real cures.

This the physician cannot, alas, deny, though he may deplore it. After allowing full discount for forged and false testimonials (which are not so numerous as supposed); for purely imaginary diseases and the credulity of mankind, and even for the lesser functional disorders, there remains behind a large residuum that cannot by any ingenuity be explained away. At any rate, the public believes it has suffered from some disease, say, rheumatism, for which, in the ordinary course and the absence of the quack, it would have gone to the nearest doctor; with the result of a possible more or less tardy cure, and the certainty of a considerable bill. Whereas now, the purchase for 7½d. or 1s. 1½d. of a small bottle of something in a wrapper black with testimonials has already given relief, maybe even before it has been taken, on the mere reading of the wonderful cures effected.

Now it is quite possible that no one is more surprised as well as pleased at the cures than the quack vendor of the same; but it is not for him to deny what he cannot account for, as the doctor is often tempted to do, because his interest is to magnify cures, which he promptly does.

It is therefore doubtless true that, in spite of all our science, quackery flourishes; and the reason of it is by no means that all men are fools, but is because it undoubtedly effects numerous cures, and some—if it be not heresy to breathe it—that have been attempted in vain by eminent scientific men, the sufferers having only tried quackery when all else has failed. It is also true that these cures astonish perhaps equally the quack and the doctor. But let us go a little further and glance at the pseudo-religious quacks and humbugs who make a gain of the credulity and folly of mankind without recourse to patent pills or 1s. 1½d. medicines. These are found everywhere, but abound most, like the ordinary quack, not, as might be supposed, in Russia, or in Turkey, or Poland, or South America, or other darkish corners of the civilised world, but in the very focus of intellectual and rational life—the United States of America.

Why quackery flourishes.

The greatest of these latter-day mystics is undoubtedly at present the Rev. Mary Baker Eddy, whose ponderous work on *Christian Science*, in two volumes, is the text-book of the entire sect, numbering certainly half a million or more here, and in America, of educated followers far above the average in wealth and culture—many, alas! formerly having been among the most lucrative of the physician's patients. This book is appointed to be read by Mrs. Eddy in all her churches, side by side with the Bible; and in one of her handsome buildings in New York, that cost over £20,000, as well as in their first

Christian Science and Mrs. Eddy.

English church, not very far from Harley Street, this work is read every Sunday morning to a crowded and attentive congregation of upper-class educated people. With their dogmas we need not interfere; cures are detailed and vouched for by the healed at every meeting, and though to some judgments *Christian Science* contains neither Christianity nor science, as generally understood, these cures cannot all be doubted or explained away.

Pseudo faith-healers.

Of the lower class of pseudo faith-healers, we hear of one in New Jersey, with 15,000 more or less educated patients in one week. Chicago has been turned upside down with one, amongst others, who has the walls of the largest hall in the city covered with crutches, splints, etc., presented by cured followers, and indeed all over the States the name of these religious quacks and humbugs is legion, and their harvest plenteous and golden. Now, though *populus vult decipi* is undoubtedly true, and though most men are fools, still cures are effected by the most arrant knaves, and testified to by most reputable persons, and, curiously enough, largely by the clergy. Many indeed are not lasting; many are very trivial, and many may be said to be due to hypnotic influence of one sort or another.

Hypnotism.

But, again, what about hypnotism and Nancy and the Salpêtrière? The investigations of the *British Medical Journal* have shown that here we have to deal with a quite inestimable amount of fraud and self-deception; but observe, we have now to examine the work of learned professors, regular and

registered physicians, and not that of mere charlatans. We have, or had, Charcot in France, and names of honour and repute in this country who testify to cures of all sorts without medicine or physical means, but in this case purely (if the word may be coined) by "psychism" in the form of suggestions—suggestions, too, which appear powerless when presented directly to consciousness, and only highly efficacious when the patient is in the "hypnotic" state. All these things are a riddle and most perplexing, and when the last echo of the laughter of derision, and the last curve of the smile of contempt have died away, there remains much to make the physician of the period at least thoughtful.

Special systems and cures.

Again, what about homœopathy, hydropathy, Matteism and all the many and flourishing Swedish, German, Austrian, Italian and other special cures? Are they unworthy of the name? By no means. Here a semi- or pseudo-scientific basis is more or less attempted, many excellent hygienic formulæ are observed, which elevate these above the mere rank quackery we have spoken of. But the great point is that cures, and remarkable cures too, are everywhere effected. And here, indeed, may be added that it is impossible to say all these are what in our ignorance at present we crudely class as "functional," though, doubtless, most are. Is rheumatism a functional or an organic disease? Is dropsy, is erythema, is eczema, is paralysis? Some hyperscientist may object that some of these are symptoms and not diseases. But what is a symptom and what is not a symptom?

Nay, more, what is a disease? And until we can answer this last profound question, how do we know whether it is functional or organic or both? Our own broad definition of the two would be that "functional" disease is that which is of psychic origin; "organic," that which is of physical. At the bottom *all* diseases involve some organic change somewhere.

But this is not all in the way of inexplicable cures.

Faith-healing centres.

What about Lourdes? Or if that be a centre of imposture, which it is, and yet isn't, what about our own faith-healing centres and others abroad, uncontaminated by the least sympathy with Roman Catholicism or saint-worship?

As these may not be so well known even to the well-informed physician, a detail or two may be given showing they at any rate exist.

A few years ago, in the Agricultural Hall, a great conference of some 2000 faith-healers was held, there being then some 120 faith-healing centres in this kingdom alone, now probably many more. In America there are over thirty homes (one of which cost over £6000, presented by a "cured" patient) and innumerable centres. There are several in Australia and many all over Europe. A few years ago in New York and Boston there was hardly a believer in faith-healing, now there are thousands. Observe these have nothing to do with the Christian scientists on the one hand or the pseudo-fraudulent faith-healers on the other, of whom we have spoken. These are orthodox and mostly evangelical.

Amongst a list of 250 published cases of disease cured we find five consumption, one diseased hip, five abscess, three dyspepsia, four internal complaint, two throat ulcer, seven nervous debility, nine rheumatism, five diseased heart, two withered arm, four bronchitis, three cancer, two paralysed arm, three weak eyes, one ruptured spine (?), five pains in the head. And these are the results in one year at one small chapel in the north of London! The list causes amusement and perhaps surprise; and impatience may be felt that such puerile details should be given. *Pace!* my scientific and learned friend; to the poor sufferers it was anything but puerile to be cured, or at any rate relieved, from diseases from which they suffered, or at any rate imagined they suffered, free of all charge; for none of these are money-making agencies, whatever else they may be.

List of "cures" in one year at one chapel.

What about charm cures? Perhaps scientists innocently suppose these have died out. Not at all; and later on we will give instances. Suffice it here to say that not only in the country districts, but it may be in the humbler regions of the physician's own house, they are implicitly believed in, and moreover even here also are cures effected.

Cures by charms and idols.

What about cures by relics and even by idols? I am told that undoubted cures are effected not only by the Holy Coat of Trèves, but all over the world, notably in India, China and Africa, in the presence of actual idols. One in India is most famous for its therapeutic power; while large temples in China are covered with votive

offerings from the "faith-healed". Trees, plants, flowers, bits of animals, etc., have all their therapeutic powers.

But the patience of our cultured reader must not be too severely tried. Turn then with relief to something more respectable.

Water and other orthodox medical cures.

What about the "cures" at home and continental spas, with their eternal round of sulphur and iron waters and baths?

Does our scientific friend in his heart of hearts believe that *all* the cures which in these cases he cheerfully certifies to *are* effected by the waters, or even the waters and the diet, or even the waters and the diet and the air; or does he not think there must be a "something else" as well? And to come nearer home and into the centre of all things, and the chamber of all his secrets: In his own consulting-room and in his own practice, is not the physician brought face to face with cures, aye and diseases too, the cause of which he cannot account for; and is he not often surprised to find a continuation of the same treatment originated by the local practitioner is, when continued by his august self, efficacious? And is not the local practitioner not only surprised but disgusted as well to find such is the case?

By what agent are all such cures mainly effected?

But we have asked hard questions enough. We will ask an easy one. What is the effectual agency in quack cures, in semi-scientific cures of all sorts, in faith cures, in relic, charm, and idol cures, in many spa and water cures, in some doctor's cures, perhaps in more than he suspects? After allowing fully for the intrinsic value of the quack

remedy, of the mystic formulæ, of the millionth dilution, or of the prismatic electricity; for the sulphate of soda or magnesium and even for the value of real B.P. drugs, we must answer—It is mainly and primarily *the power of the unconscious mind over the body.* It is this, and this pre-eminently; and it is this, and this pre-eminently that is everywhere ignored, however much other minor factors may be extolled.

Now we see how hard it is for a physician to own this, and here is the "other reason" for his otherwise inexplicable "agnostic" position. It at once gives a sort of *locus standi* to the unregistered and unqualified therapeutists of all denominations; not only admitting their cures, but giving a scientific reason for them, probably unknown to themselves. And worse still, it puts the physician at first sight on somewhat of the same level in effecting many cures, in equal ignorance, by the same means.

Further and worthier thoughts will reveal that it is vain to fight against truth for any secondary reasons; and the question is—Is it true?

We think that those who really honour this subject with their grave and careful consideration will say that it is: and that even those who do not, and who merely skim the evidence we shall give, will say at least—"There must be some truth in it".

If this be the case, how strange that such a therapeutic agent should have been so ignored, that by none of our leading surgeons and physicians do we see the influence of the human

Mental therapeutics.

mind over the human body really seriously dealt with. One may find here and there an honourable exception, it is true, distinguished alike by his rarity and by the obloquy he incurs.

This power is everywhere ignored.

The power of this influence of the mind over the body cannot be limited, and is everywhere seen and felt: in out-patient departments, in the hospital ward, in the consulting-room, and by the sick bed; but it is seldom spoken about, and still less often taught; though few are bold enough to deny the potent powers of mental therapeutics for good.

If one turns from the physician's daily life to his library, one still fails to find in any text-book or modern system of medicine, the subject fairly and fully recognised. I have looked through many leading works on medicine, but in no standard work can I find this subject seriously considered and discussed. A volume called *Suggestion in Therapeutics*, from Nancy, shows the use of the unconscious mind as a curative agent when under hypnotic suggestion; but we want far more than this. Here and there great masters in medicine have admitted the enormous value of mental therapeutics, but the subject has not been followed up, save for the sake of filthy lucre by quackery.

It is the same in the teaching, clinical or otherwise, in the hospitals or class-rooms. Students listen with rapt attention to the powers of guaiacol, piperazine, phenocoll and the whole round of well-advertised modern drugs; but how often is their attention directed, save in ridicule, to this mighty curative agent, that in its

powers pretty well balances the whole Pharmacopœia —the mind? In the *British Medical Journal* we find this remarkable sentence: "Disease of the body is so much influenced by the mind that in each case we have to understand the patient quite as much as the malady. *This is not learnt* at hospitals."[1]

Does any practical medical man doubt these powers? Is he not aware of the ingredient "faith," which, if added to his prescriptions, makes them often all-powerful for good? Does he not know experimentally the value of strongly asserting that the medicine will produce such and such effects is a powerful means of securing them?

Mental therapeutics should be taught.

If, then, this power is so well known, why, in the name of common-sense, should it be pooh-poohed and ignored as it is? It has its laws of action, its limitations, its powers for good and for evil; would it not clearly help the medical student if these were indicated to him by his lawful teachers, instead of his gleaning them uncertainly from the undoubted successes of the large army of irregulars?

We are, however, inclined to think that, after all, a silent revolution is slowly taking place in the minds of medical men, and that our present text-books on disease, content with merely prescribing endless selections and combinations of nauseous drugs, and dismissing any mental cure in a single line as unworthy of serious consideration, will soon be replaced by others

[1] *British Medical Journal*, Educ. Number, Autumn 1897.

containing views more worthy of the century at the close of which we live.

A beginning is being made.

For although these drugs are still administered, but few medical men now believe that they are the entire cause of the cure ; for very gradually it is beginning to dawn upon us that most nervous diseases at any rate are easily and naturally treated by mental therapeutics, and that the still persistent efforts to cure them by the stomach are neither reliable nor rational.

It ill becomes, therefore, the medical man, who recognises in these cases that it is the mind that cures, to decry any form of faith cure, however little its process may be understood by him in detail. We have seen that the powers of the conscious mind over the body are well-nigh immeasurable ; and knowing, as we now do, that our old division into functional and organic diseases is merely the expression of our ignorance, and that all diseases, even hysterical, involve organic disturbance somewhere, we are prepared to believe that faith and other unorthodox cures, putting into operation such a powerful agent as the unconscious mind, or, if you prefer the formula, " the forces of nature," *are not necessarily limited to so-called functional diseases at all.*

Truth must be owned, in spite of quacks.

It is because, therefore, mental therapeutics has been practically for so long the real *modus operandi* of the vast army of charlatans, that the whole subject has acquired such a bad name that most men fear for their reputation if they touch it.

It is no doubt the connection of mental therapeutics directly with faith-healing, Christian science-healing and hypnotism; and indirectly with liquid electricities, billionth dilutions, and quack remedies of sorts, that has so far deterred the profession from examining very closely its wonderful powers.

We feel quite sure, however, that all such reasons will fall to the ground when the fact of the unconscious mind is admitted, clearly and definitely, by scientific men; and once its powers become generally recognised they will at last, after long neglect, be made the subject of serious study. May we add here two brief utterances from other lips?

Dr. Maudsley says: "Perhaps we do not as physicians consider sufficiently the influence of mental states in the production of disease, their importance as symptoms; or take all the advantages which we take of them in our efforts to cure disease. Quackery seems to have got hold of a truth which legitimate medicine fails to appreciate or use adequately."[1]

Dr. Granville adds: "Except in a loose and vague way the potent influences exercised reflexly by the mind upon the body are scarcely regarded as falling in with the scope of pathology".[2]

It is to be therefore earnestly hoped that the relations of the mind to the body will soon become better understood, and that we shall have in our teaching schools (what is at

Relations of mind to body better understood.

[1] Maudsley, *Mind and Body*, vol. i., p. 38.
[2] Mortimer Granville, *Lancet*, 1879, vol. i., p. 580.

present so greatly lacking) those who can train the coming race of doctors in the therapeutic use of the mind, in functional and other disorders. Certainly experience increasingly shows that it occupies as clear and well-defined a place in relation to many diseases as drugs do in others, although the *modus operandi* may in both cases be not yet fully understood.

It is quite time that a reaction took place against the popular doctrine of the dependence of mind on body, which is fast reaching a *reductio ad absurdum*, in the tracing of every changing mental state, and even of every morbid impulse or criminal action, to a deranged liver, or an anæmic brain. No doubt before long the pendulum in England will swing over completely to the other side (as it has already done in America to the remarkable extent displayed in the "mental cures" we have already spoken of), and most bodily disorders will be attributed to a diseased mind. The truth meanwhile occupies, as ever, the medium position between the two, there being times when the body sways the mind, and other times when the mind sways the body, the two being, as has been forcibly expressed by Miss Cobbe, something like a pair of coupled dogs; sometimes one and sometimes the other obtaining the victory, and sometimes both pulling together in harmony.

Let us proceed briefly to consider how the mind affects the body in disease.

In what way does the mind affect the body in disease?

In disease the unconscious mind has special power over the body. The very word disease is coined to express a mental idea "ease," and not

a physical change. The cortex, or surface of the brain, is a special factor for good or evil in every disease. Every organ and function is represented there, and there brought into vital unity. Professor Laycock says: "The hemispheres, as the organ of thought and mental action proper, are in unity with all the processes of life whatever, whether they be termed vegetative or animal". Indeed, the unity of the body, and, to a great extent, of the "ego," is formed in the cortex. Bain shows that all tissue nutrition is unconsciously influenced from this great centre, and most physiological processes can be arrested mentally by its action. It controls anabolic and katabolic cell action; and there is no doubt that a sound, cheerful mind, acting through it, is a great protector against disease of all sorts; and if disease has obtained a hold, a cheerful mind can often cure it. Mental therapeutics can be applied to the body in one of three ways: (1) by the unconscious mind directly—in spiritual or physical influences and surroundings; (2) by the unconscious mind acted on by the conscious indirectly—in rousing faith in persons, remedies, or places, etc.; and (3) by the unconscious mind acted on by the conscious by direct effort—in determination to get well, to shake off illness, ignore pain, etc. With regard to the ailments for which mental therapeutics is useful, it is a powerful means of cure in all organic and inorganic diseases, while in hysteria and allied neuroses, it is the only reliable means of permanent efficacy.

Three ways of application.

How hysteria is produced.

Let us consider for a moment the process by which in hysteria disease is caused by mental action.

Our brain not only acts by the will and by ideas of which we are conscious, but is continuously vibrating with ideas, memories, and trains of thought of which we are unconscious. It is so even with regard to common sensation. If you concentrate your attention on any part of your body, you become aware of sensations in it that escaped your attention before, but were equally there then. If with a feather I lightly tickle the back of your neck, and at the time you are engaged in very earnest conversation, the vibration aroused in the brain sensory centre is unnoticed by you; and yet if I call your attention to the part it is noticed at once. By increasing the stimulus I can make the waves of vibration set in action other centres: involuntary ones, such as cause a shaking or shuddering of the neck; or voluntary, such as turning the head round or moving away.

If you are asleep I may tickle your foot, so that you draw the leg away and you wake up. In this case you are probably conscious of moving your leg; but the stimulus that made you do it was too slight to reach your consciousness. We may thus be conscious of a transferred vibration leading to action or sensation, and yet be ignorant of the cause that set it going.

Memories, again, will involuntarily, and it may be unconsciously, arouse both feelings and actions. One may have smelt the strong scent of some flower when

some critical event took place, a proposal of marriage or some sudden news; henceforth, whenever the topic is touched on, the very scent or vibrations of the nerve of smell that represent it may be exactly reproduced. A certain field always recalls a certain song we used to sing as we crossed it on our way to school. Thoughts of old Anglo-Indians set the vibrations of Eastern sights and sounds in action again in the old centres.

Effect of associations.

Observe in all these cases we are considering natural associations, not vibrations deliberately set up by the will in an unusual way. You can, as shown already, think of a green field when in a drawing-room until you set in vibration the centre of sight and see the green grass; or the centre of hearing, and hear the lowing of the cattle or the hum of the insects. This is much easier if there are no distracting sounds, and if you close your eyes; and still more so if there are some insects actually humming in the room. But the memories we speak of are wholly unconscious ones.

Let us now sum up our results, taking a definite case, say, of a pain in the little finger. This pain is felt in the little finger, we say, though we really know that the only seat of any sensation is in the brain. It is there at the central termination of the ulnar nerve which leads from the little finger that all the vibrations take place, of which the mind becomes conscious and calls pain. Whenever these vibrations take place in the nerve centre belonging to the little finger in the brain, the mind always

Pain always referred to origin of nerve.

refers the sensation to the commencement of the nerve in the little finger, whatever may be its real origin.

In the same way, if in your house the hall-door bell rings, you say there is some one at the hall door; if the drawing-room bell, there is some one there: and yet such may not be the case. I may have pulled the door-bell wire inside the hall, or as I passed down the kitchen stairs; or a rat may have moved it, or I may have struck the bell itself and made it ring, or a shock of earthquake may have shaken it, or a strong gust of wind; and yet, although these causes are so various, you, in the kitchen, always say, "There is some one at the front door".

Pain, however caused, is referred to the same part.

It is so in the body. 1. The little finger is pricked—there is pain in the little finger. 2. The ulnar nerve itself is pressed on somewhere in its course—there is pain in the little finger. The hand may be cut off, and still if the nerve be irritated in the stump by pressure, the man feels the pain in his imaginary little finger as truly and vividly as if it were still actually there. 3. Or, again, there may be a tumour in the brain pressing on the nerve centre in the brain of the ulnar nerve and the most acute pain is felt in the little finger.

All these instances are from direct irritation of the nerve in some part of its course. But, as we have seen, we may go much further. The hall-door wire may have got caught with the drawing-room one, so that when the latter is pulled, it is the hall-door bell that rings; the vibration is thus transferred. So in the brain.

4. I may set to work to think of my little finger and so start sensations in it which, if not actual pain, are still sensations. But if I have the idea it is injured, though it may not be, I may feel the pain acutely from an idea alone. 5. But, again, the pain may have been originally caused by a gathering in the little finger, and afterwards kept up long after the gathering was gone by the ideal centre. 6. Association, as seeing others with crushed little fingers; or, 7. memories, conscious or unconscious, of crushed little fingers may also start and keep up this pain.

Observe, then, the varied causes with the same effect. Only, in conclusion, we may add that while in health it is generally easy to discriminate between pain in the little finger caused by injury to the little finger, and that set up in other ways, in nerve disease it is not. Nay, it is sometimes impossible not only to the sufferer, but to the doctor who attends him.

Real feelings can be caused by ideas.

It has been well said, "We think as we feel, or think we feel, and we feel as we think. If we feel a pain, we think we are ill; and if we think we are ill, we feel ill." If my ideal centre vibrates with the thought of crossing the channel in rough weather, and pictures the nausea that would then be felt, the vibrations are transmitted to the terminal centres of the sensory nerves running from the stomach, and I actually feel sick from communication with a sensory centre; and, possibly, if of a highly nervous organisation, may actually be sick from transference to a motor centre.

Real feelings and real acts can be started in entirely ideal centres. If we *think* intensely of any part of the body long enough, we *feel* sensations in that part. If we think of a good dinner our mouth waters. We shiver whether we only think of cold or actually feel cold. The sensation of pain can be produced as really and vividly by thoughts or ideas alone, as light in the eye by striking it. In short, every sensation of the body ordinarily produced from without can also be produced from within.

Ideal vibrations may be conscious or unconscious.

These ideal vibrations, acting on motor and other centres, are quite different from the action of a motor centre by the direct impulse of the will, the action being in the latter case voluntary and in the former involuntary. So far we have only spoken of ideas of which we are conscious, so that, although the modes of exciting these motor and sensory centres are abnormal, *we know them to be so*, and hence are not deceived and do not deceive others into believing them to be natural.

Thus, when our teeth are on edge from sounds, we do not go to the dentist; if we are sick from ideas, we do not think we are dyspeptic; if we hear noises in the ear, we do not look for them externally; if we shiver from thinking of cold, we do not put on more clothing; but this is because we are conscious that the cause is mental; in other words, of the action of the mind. It is quite otherwise where the pain or paralysis is caused by mind action of which we are wholly unconscious, the conscious part of the mind being, at the same time,

in a susceptible and morbid state. The patient has then no means of diagnosing that the cause of the disease is mental. Indeed, it is rather hard to expect this, when the doctor himself often cannot tell. But it is still worse when we proceed either to tell the patient there is nothing the matter or that it is "only hysterical".

Ideal diseases are not counterfeit.

Listen for a moment to the usual routine treatment of a nervous case: "When one of these victims to hypochondria, who are commonly called *malades imaginaires*, has recourse to medicine for the relief of pain or some other disturbance, he is usually told it is of no importance, that he is fanciful, and some anodyne is carelessly prescribed. The patient, who is really suffering the pain he has suggested to himself, feels convinced that his malady is not known, and that nothing can be done for him. The idea that his complaint is incurable becomes intense in proportion to his high opinion of the physician's skill; and thus the patient, who was suffering from the chronic affection suggested by his imagination, often goes away (not only uncured, but) incurable." [1]

Let it be remembered that *a disease due to the imagination is not necessarily an imaginary disease*, but may produce various functional and even organic disturbances. A wise physician once said to me: "If a man is so ill as to say he is ill when he is not ill, he must be very ill indeed". The diseases grouped under the heads

[1] Binet, *Animal Magnetism* (Internat. Science Series), p. 353.

of nervousness, hysteria, etc., are real in origin and effects, and formidable in their nature; and it is high time that the ridicule, the offspring of ignorance, with which they have been so long surrounded, be entirely done away with. These unhappy sufferers have been greatly wronged and often cruelly treated.

In a recent medical work we read: "The sister of the ward and the house physician settled between them that the case was hysterical, and the girl was malingering" (*i.e.*, shamming); that is, that hysteria *means* shamming. Such a statement takes us back to the dark ages, when all insanity was possession by an evil spirit, for it certainly implies that one with serious nerve disease is simply possessed by a lying spirit. More sympathy and less contempt is indeed felt for a drunkard than for a hypochondriac. Picture the misery of a nervous invalid in a hearty English family, say of the bucolic order. "It is all fancy," is the stock phrase before her face; "it is all humbug," the one behind her back. This ignorance is partly due to the fact that the symptoms are generally subjective rather than objective, and that observation is not so much needed as reasoning power. But the real cause is this. It is seen the disease is partly of mental origin; and no mind being known or recognised but conscious mind, it follows the patient must be aware of the mind action causing the disease, and is therefore to some extent to blame. The truth, which we hope will now be recognised by medical men, is, that all the causative changes take place in the unconscious mind, and that the patient is wholly ignorant of any-

thing but the results in the body—the pain or disease suggested. This is the *true solution* of the difficulty.

Modes of applying mental therapeutics.

The best cures of hysteria are naturally, therefore, effected through the unconscious mind. If the case is in every way in good health, and has not entered the vicious circle of dyspepsia and debility, it may be cured instantaneously by applying to the irritated ideal centres that keep up the disease good suggestions, consciously or sub-consciously, sufficiently powerful to overcome the bad ones. Their application by means of hypnotism is unnecessary, and often in the end aggravates the condition which it is meant to relieve; for suggestions are thoroughly effectual without it, if one has confidence, and has gained the respect and trust of his patient.

If all this appears as novel as some of the terminology here used, it is simply because mental therapeutics is still the unexplored Africa of medical science, for it is still very dubious orthodoxy to suggest that there can be any means of cure that is not found within the revered pages of the British Pharmacopœia.

Suggestion and nitrogen.

We must, however, remember one great point with regard to suggestion—that it is like nitrogen. Nitrogen is the essential element in all animal life; it forms four-fifths of the air we breathe, and yet, curious to say, we have no power to use it in a pure state. We can only take it unconsciously, when combined with other substances in the form of proteid food. It is the same with suggestions. Not one hysterical sufferer in a hundred can receive

and profit by them in a raw state—that is, consciously; they must generally be presented, as we have said, indirectly to the sub-conscious mind by the treatment and environment of the patient. An electric shock often cures slight hysterical diseases instantaneously, acting, as it does, on the unconscious mind through the conscious.

No doubt it would be easier if we could say to these sufferers, "The disease is caused by suggestions from ideal centres, and to cure it, all you have to do is to believe you are well". Still, as it would be impossible for us to take our nitrogen pure from the air, the mind cannot as a rule be thus acted on directly when the brain is unhealthy. Suggestion must be wrapped up in objective treatment, directed ostensibly and vigorously to the simulated disease.[1]

Bad suggestions inhibited.

It is not, however, enough in mental therapeutics to present good suggestions; we must also remove previous bad ones. Such a patient must therefore be isolated to avoid conversations about, and sympathy with the patient's sufferings, all of which keeps up the action or vibration of the diseased ideal centres. The range of mental therapeutics is, however, by no means limited to hysterical diseases. The powers of the unconscious mind are such that we can place no limits to its influence. When the mind is really unsound, it is interesting and remarkable—though quite intelligible—to notice that mental

[1] For the value of surgical treatment in some internal neuralgias, see paper by F. Treves, *Brit. Med. Journal*, 10th March, 1898.

therapeutics generally fails; obviously because the psychic element on which it should act is in itself disorganised. From what has been said, it will be gathered that in ordinary and some nervous diseases, while mental therapeutics acts largely through the unconscious mind, it can also be successfully directly presented to the intelligence; while, on the other hand, in true hysteria nearly all the work has to be done unconsciously, the conscious mind being fixed, not on mental therapeutics, but on the outward means used.

CHAPTER XVIII.

THE UNCONSCIOUS MIND AND THERAPEUTICS, I.

Examples of mental diseases and therapeutics.

We now propose to give some instances of diseases and cures produced by the unconscious action of the mind upon the body, gathering them mostly from the experience of others. Amongst the examples given there may be several that may be questioned, others where the curative agent may possibly be other than purely psychical. The reader will not reject the whole evidence because one or two instances appear to him to be incredible or inapplicable; but will rather consider, as we did with quack cures, whether, even after all such are deducted, a sufficient body of evidence does not remain to establish the truth of mental therapeutics.

Functional diseases of mental origin.

First, then, as to functional diseases which are mostly classed under the inappropriate and much-abused term of hysteria. We commence with these inasmuch as functions stand before organs, for it is *mind that conditions matter*.

We find thought, conscious and unconscious, acts freely on the secretions of the skin as in fear, on the kidneys as in all excessive emotion and on the intestinal glands.

We find mental emotions alter also the character of all the secretions of the body—milk, sweat, urine, etc.

Unzer says that many glands pour out their secretions from imagination. To get enough saliva for his experiments, Eberle imagined acid fruits.

The different positions of the hand as held out with the fingers spread, much used lately in the diagnosis of nervous disease, are due to the so-called spontaneous nerve activity, dependent entirely on mental conditions.

Diseases, or, at any rate, minor ailments, as we have seen in chapter vi., may be the result of habit. We get thus a habit of sleeplessness, of recurrent pain, of constipation, of retention or incontinence of urine, etc. These have therefore a strong mental element.

Disease from habit and imitation.

A servant girl mentioned by Bernheim had hysterical retention of urine. Here the unconscious auto-suggestion was so strong that no suggestion offered consciously or hypnotically could cure it.

On the other hand, the hearing of water poured slowly into a basin often relieves retention. A lady I know almost suffered from incontinence when at Niagara from the sound of the falling water.

A gentleman known to me seeing a friend with stricture of the gullet soon experienced a difficulty in swallowing, and ultimately died of spasm of the gullet.

Dysphagia, so that no food can be taken, spasms of the glottis, so that one cannot breathe, and of the bronchial tubes, phantom tumours exactly simulating real growths, paraplegia, hemiplegia, contraction of

limbs, convulsions and fits, and loss of voice, are all common and well-known diseases produced by the unconscious mind.

Hack Tuke gives the following instances of functional diseases of mental origin :—

A healthy boy was lying in his cradle when a cock perched on the side; the boy was at first amazed, but afterwards was afraid, as the cock stretched his neck, put his head down and looked closely at the boy; he then flapped his wings and crowed. The child gave one sharp cry of pain and was instantly convulsed, three or four fits occurred the same day, and the boy grew up an idiot.

Paralysis of mental origin.

Emotion is a most common cause of the aggravation of paralysis agitans, hence during sleep movements are calmed. During the Reign of Terror an abbé was seized by the mob. He escaped, but he afterwards had continual tremors of the limbs.

In hysterical paralysis Charcot observes the face is never paralysed.

Dr. Russell Reynolds gives us a case of paralysis which shows how motor and sensory disturbances may be first developed, and then destroyed under the influence of ideas.

He was called to visit a young woman whose father had lost money, and had been paralysed through grief. She herself supported the whole household by giving lessons in various parts of the town. When fatigued by her long walks she sometimes thought that she too

might become paralysed, and that then their situation would become desperate. The idea haunted her. Under its influence her limbs grew weak, and she soon lost her walking power.

Dr. Reynolds visited her, prescribed purely mental treatment, and at length convinced her that she was able to walk, when she at once resumed the practice.

This young woman's experience confirms (says Gliddon) Battey's teaching, that in the case of some subjects who have never been hypnotised, paralysis may be produced by giving them the idea that they are going to be paralysed (and we may take away by a contrary suggestion).

Professor Biener (Vienna) considers that the "sundering of consciousness" exists in rudimentary fashion in every case of hysteria. The foundation and condition precedent to hysteria is the existence of hypnoid states (or what he would call unconscious consciousness).[1] Double consciousness.

Now we—we think more intelligibly—understand by this "sundering of consciousness" the distinction between the conscious and the unconscious mind; and the hypnoid state is the revelation by its effects of the powers, not of "unconscious consciousness," but of the unconscious mind; while consciousness is partly in abeyance or its powers impaired.

He continues: "In hysteria we have groups of formal images which are cut off from association with the rest of the patient's imagery and constitute the rudi-

[1] Prof. Biener (Vienna), *Neuroligsches Centralblatt.*, Jan., 1893.

ment of a second consciousness. In acute hysteria this hypnoid consciousness has made itself master of the whole 'ego'. Hence hysteria is not only a psychosis or affection of our conscious psychic life" (but of our unconscious mind).[1]

Organic diseases of mental origin.

Let us now turn to the more difficult question of the production of organic diseases, wholly or partially by the mind.

Sir Samuel Baker says that any severe grief or anger is almost certain to be succeeded by *fever* in certain parts of Africa.[2]

Fever, kidney disease, hæmoptysis, cancer, diabetes.

Dr. Clifford Allbutt says it is an undoubted clinical fact that *granular kidney* is often produced by prolonged mental anxiety.

Diabetes is undoubtedly caused by mental strain. Sir B. W. Richardson has known diabetes caused from pure mental strain. He says also: "Diabetes from sudden mental shock is a true pure type of a physical malady of mental origin".[3]

He also investigated the renal secretion in mental repose and in activity. He found that eleven parts of urine were secreted in repose, compared to thirteen when the brain was active. The amount of urea was also augmented to the extent of about a grain.

Sir James Paget tells us of a young man who had *hæmoptysis* on his birthday and for nine years after on each birthday, being quite free between. He died of rapid consumption after the tenth birthday.

[1] Prof. Biener (Vienna), *Neuroligsches Centralblatt.*, Jan., 1893.
[2] *British and Foreign Medico-Chirurgical Review*, 1877.
[3] Sir B. Ward Richardson, *Discourses*, p. 16.

Sir George Paget says: "In many cases I have seen reasons for believing that *cancer* has had its origin in prolonged anxiety".[1]

Dr. Murchison says: "I have been surprised how often patients with primary *cancer* of the liver have traced the cause of this ill health to protracted grief or anxiety. The cases have been far too numerous to be accounted for as mere coincidences."

Dr. Snow (*Lancet*, 1880) asserts his conviction that the vast majority of cases of *cancer*, especially of breast and uterine cancer, are due to mental anxiety.

Jaundice from mental emotion is recorded by Dr Wilks.[2] Jaundice from anxiety by Dr. Churton.[3]

"The 'surest' way to be attacked with an *infectious disease* is to be afraid of it, whilst the physician under like circumstances is very rarely attacked. Lively fear and the thought of sickness is of itself sufficient to cause the same."[4]

The mind in infectious disease—cholera, epilepsy, jaundice, boils.

With regard to *cholera*, Dr. Stokes says: "The first sight of cholera patients gives rise to symptoms of cholera afterwards".[5]

Dr. Bateman tells us of a poor woman who got general *anasarca* in one night after the loss of all her money (only a small sum).[6]

[1] Sir George Paget, *Lectures*, p. 165.
[2] Dr. Wilks, *British Medical Journal*, 2nd July, 1870, p. 4.
[3] Dr. Churton, *British Medical Journal*, 19th Nov., 1870, p. 547.
[4] Ed. v. Hartmann, *Philosophy of the Unconscious*, vol. i., p. 181.
[5] Dr. Stokes, *Lectures on Fever*, pp. 6, 7.
[6] Dr. Bateman, *Practical Symptoms of Cutaneous Diseases*, 7th edition, p. 214.

Emotion causes epilepsy, diabetes, jaundice, urticaria, rachalgia, paralysis, boils, cancer, gastric diseases, retention of urine, granular kidney, anasarca, and in various medical papers cases of each of these are recorded.

Mental origin of cases of apoplexy, atheroma, dilatation, Grave's disease.

Dr. Lys speaks of both *apoplexy* and *anæmic* bruits occurring during mental anxiety, being caused by arterial tension, also of many cases of *atheroma* where no cause is known but some mental disorder.[1]

Also of cardiac *dilatation* in young people, which may be due to palpitation in the increased vascular tension from mental causes.[2]

He further says: "In every case of *Grave's disease* (exophthalmic goitre) there is a morbid mental state of a constant character which precedes its development and consists of depression with extreme irritability".[3]

Special case of reversed peristalsis.

In connection with the action of the digestive canal, the following striking instance of the power of the unconscious mind in influencing the body abnormally, and producing disease, is so incredible on the face of it that it is well to say that every detail is vouched for personally by the writer.

Early in 1897 a woman was admitted into a London hospital with fæcal vomiting. Her abdomen was covered with the scars of previous incisions, made in order to find out the cause. The whole of the contents had been carefully examined, but once more a fresh opening was made

[1] Dr. Lys, *Lancet*, 1892, vol. i., p. 904. [2] *Ibid.* [3] *Ibid.*, p. 905.

and the colon specially overhauled. All the viscera were healthy, nevertheless the fæcal vomiting was genuine. Most careful experiments conducted by the surgeon and house surgeon yielded almost incredible results. Two ounces of castor oil introduced into the rectum were vomited with fæcal matter in from ten to fifteen minutes. Half a pint of water stained with methyl blue introduced into the rectum was vomited in the same time and so on. The cause of this marvellous reversed peristalsis was purely mental, and the patient was eventually relieved by wholly mental discipline and therapeutics, and was discharged cured.

Returning to ordinary diseases. Respecting *atheroma*, Clifford Allbutt says he knew a young man whose pulse tracing for twelve months during severe anxiety showed increased tension.

Dr. Stephen Mackenzie gives three striking cases of *pernicious anæmia* caused by mental shock.

John Hunter says: "An exciting cause of *angina pectoris* has long been known to be emotional excitement".

Mental cases of pernicious anæmia, angina, skin eruptions.

Sir B. W. Richardson says: "*Eruptions* on the skin will follow excessive mental strain. In all these, and in cancer, epilepsy and mania from mental causes there is a predisposition. It is remarkable," he adds, "how little the question of the origin of physical disease from mental influences has been studied."[1]

[1] Sir B. Ward Richardson, *Field of Disease*, p. 618.

It *is* remarkable, and more than remarkable, it is deplorable; and we sincerely hope that ere this century closes some definite change will be made in the attitude of medical men with regard to this great and interesting question.

"I am sure," says Dr. Richardson, "that modified, if not new, forms of disease, developed through the mind, are much more common than they were." [1]

Muscular inco-ordination seems to arise from some error in the action of the unconscious mind.

Other errors occur when it is deceived by means of consciousness, *e.g.*, Dr. Durand's house surgeon gave 100 patients in a hospital a little coloured water and then told them he had given them a strong emetic by mistake. This, addressed to their consciousness, falsely gave the impulse to the unconscious mind, which caused eighty of them to be absolutely sick.

Deaths caused by mind action.

But not only functional and organic diseases of every description are caused by the mind, but *death* itself is quite common.

We give a few instances, mainly from Dr. Tuke's book:—

In May, 1873, a stockbroker in Paris fell down in an apoplectic fit, and soon died on hearing that his valet had been found shot through the head.

In the *Lancet*, 1867, is the case of a woman forty-three years old who died in a fit from finding her daughter, whom she expected was killed in a railway accident, come home unexpectedly.

[1] Sir B. Ward Richardson, *Field of Disease*, p. 620.

A sister, having nursed her sister during a long illness, until her death, did not then give way to grief, but appeared perfectly unmoved. A fortnight after she was found dead in her bed, but there was no *post-mortem* cause found, except the depressing influence of pent-up grief through the nervous system.[1]

Dr. Sweetser tells us of a lady who, feeling a living frog fall into her bosom from the clutches of a bird, was seized with such profuse hæmoptysis that she lived only a few minutes.

Professor Rolleston points out that after defeat an army readily succumbs to dysentery, scurvy, malarial fever and other diseases, that have comparatively slight effect when it is victorious.

"A laundress coming home along a lonely road from a solitary walk looked ill and excited; she said that a man had jumped out of a cemetery as she passed. She died at the supper table. The *post-mortem* examination showed all the organs healthy except the heart, and the verdict was 'death from syncope due to shock'."[2]

Dr. Walshe says: "A man came to insure his life in full vigour and was rejected, and told he had only a diseased heart. He became melancholic and died the week after."

Signor Laura in reporting on a station master who had died suddenly after hearing that his station had been robbed, points out that "sudden mental emotion may cause death in persons of robust health in a very

[1] W. B. Carpenter, *Mental Physiology*, 4th edition, p. 326.
[2] Hack Tuke, *Mind and Body*.

short time; that the physical phenomena induced by this mental cause show a profound perturbation of the nervous system generally of an adynamic character". He concludes that the man had undoubtedly died solely from mental emotion; no preceding or accompanying cause of death being present.

Brown Sequard says, when a violent sudden emotion causes death it is by its action on the medulla oblongata.

A medical student had his eye bandaged and a vein was pretended to be opened in his arm. A stream of water was then spurted into a bowl, and the student, thinking it was his blood, became pale and fainted. Another actually died from a similar sham operation.

Dr. Lys tells us of a man suffering from angina, who dropped down dead in a fit of anger at St. George's Hospital.[1]

I have been told by a naval surgeon from an African squadron that Kroomen, if badly treated or angry, will threaten to die; and will go away and actually expire within thirty hours without any injury or disease.

Unconscious mind and therapeutics.

But we must now turn to the other side of the question and come to the consideration of mental therapeutics; and we may begin by saying a word about this curative agent generally before proceeding to give examples. We have already pointed out in the preceding chapter how and why it is so ignored in the regular practice of

[1] Dr. Lys, *Lancet*, 1892, vol. i., p. 905.

medicine, being, however, vigorously and successfully used by every discription of quack—respectable and otherwise—in every country, as well as by all others who cure without the aid of drugs.

By this we do not on the one hand imply it is consciously used by the majority of these; nor do we on the other hand doubt that it is largely the unsuspected agent of cure amongst those who rely chiefly on drugs. But for the powers of the unconscious mind quacks would long since have ceased to exist, and doctors would be deprived of half their cures.

Antiquity of mental therapeutics.

The antiquity of mental therapeutics is great. In the oldest civilisation with which we are acquainted, that of Egypt, it had a prominent place. Colquhoun, quoted by Gliddon, remarks: "Their priests evidently appear to have perfectly comprehended the method of exciting that internal sanative instinct in the human organism, which in general is a profound mystery even to the individual who excites it; and which was, therefore, naturally enough perhaps in those remote ages, represented as an immediate gift of the gods. Nowhere was this internal faculty so generally cultivated for the cure of the sick, as also for other affairs of this life, as in Egypt."[1]

The excavations at Cavvadias have furnished us with much interesting material, showing that the miraculous cures of Epidamus were effected at this ancient Greek

[1] Gliddon, *Faith Cures*, p. 8.

shrine 500 years before our era, in precisely the same manner, and by suggestion as in our times at Lourdes.

In 1651 we read the following sound and thoughtful remarks: "All the world knows that there is no virtue in charms, etc., but a strong conceit and opinion alone, as Pomponatius holds, which forceth a motion of the humours, spirits and blood, which takes away the cause of the malady from the parts affected. The like we may say of the magical effects, superstitions, cures, etc., such as are done by mountebanks and wizards. As by wicked incredulity many men are hurt (so saith Wierus), we find in our experience by the same means many are relieved." [1]

Modern views on mental therapeutics.

Coming down to our own times we find a careful analysis of the cause of faith-healing as follows: "There can be no question that faith-healing is a fact. The brain is not simply the organ of the mind, it is also the chief centre, a series of centres, of the nervous system, by which the whole body is energised and its component parts with their several functions are governed and regulated. There is no miracle in healing by faith; whereas it would be a miracle if, the organism being as it is, and the laws of life such as they are, faith-healing did not, under favourable conditions, occur." [2] Here conscious mind alone is recognised; the unconscious mind being "a series of centres" endowed with psychical powers!

It must not be forgotten that function goes before

[1] Burton, *Anatomy of Melancholy*.
[2] Editorial in the *Lancet*, 13th June, 1885.

organism in development, and that there are large classes of cases in which the disabilities of the diseased organ, for a fair performance of its functions, are mainly due to a want of power or regularity in action.

The *vis medicatrix naturæ* is a very potent factor in amelioration of disease, if it only be allowed fair play. An exercise of faith, as a rule, suspends the operation of adverse influences, and appeals strongly through the consciousness, to the inner and underlying faculty of vital force (*i.e.*, unconscious mind).

The *vis medicatrix naturæ.*

We regret to see that Dr. Pye Smith, in an inaugural address to medical students, says : " The *vis medicatrix naturæ* is a figment which owes its prevalence to its Latin dress ".[1] This is not so, it owes its vitality to the deep underlying truth it contains, and students should know this ; a truth, moreover, by which all physicians are profiting every day.

Again : " We will even go so far as to affirm that a very large proportion of the ailing might be and probably would be sound, if only they were sufficiently strongly impressed to believe themselves so. The influence of the *mind* (here observe in the same journal the ' vital force ' of 1885 is boldly called ' the mind ' in 1888) upon the body has been the stronghold of quackery from the earliest times, and faith is as powerful an influence for good or evil now as it has ever been." [2]

[1] *British Medical Journal*, 9th October, 1897.
[2] *Lancet*, 28th February, 1888.

Dr. Carpenter says: "That the confident expectation of a cure is the most potent means of bringing it about, *doing that which no medical treatment can accomplish*, may be affirmed as the generalised result of experiences of the most varied kind extending through a long series of ages".

There is a large body of trustworthy evidence that permanent amendment, of a kind perfectly obvious to others, has shown itself in a great variety of local maladies, when the patients have been sufficiently possessed by the expectation of benefit, and by faith in the efficacy of the means employed.

Cause of faith cures.

Observe here it is not the faith itself that cures, but faith, fear, etc., set into activity those powers and forces that the unconscious mind possesses over the body, both to cause disease and to cure it.

"Those who undertake miraculous cures . . . do not deny the existence of disease, but assert that it may be cured by supernatural power. They act by means of suggestion and by gradually inculcating the idea that the disease is curable, until the subject accepts it. The cure is sometimes effected by the suggestion, and when it is said to be by saving faith, the expression is rigorously scientific. These miracles should no longer be denied, but we should understand their genesis, and learn to imitate them. These are therefore no imaginary diseases, but are diseases due to the imagination, and accompanied by real functional disturbances. Such disturbances may be developed

under the influence of spontaneous (unconscious), accidental, or deliberate (conscious) suggestion, and they may be cured under the influence of another suggestion of equal intensity working in an inverse direction. The moral treatment ought not therefore to consist in denying the existence of the disease, but in asserting that it is susceptible of cure, that the cure has actually begun, and will soon be completed." [1]

Turning now to examples of the physical power of psychism, we will commence with a few showing its natural power, quite apart from any treatment, or any possible intervention of consciousness.

First as to the *vis medicatrix naturæ* :—

For and against the healing power of "nature".

Against it we read, "In the long catalogue of serious diseases, natural cure is the last remedy discernible".[2]

"The term '*vis medicatrix naturæ*' is an entire misnomer, except it be limited to the simple capacity possessed by the organism to resist gravitation. A belief in it in the concrete has no basis whatever." [3]

But in favour of it Dr. Bruce says: "We are compelled to acknowledge a power of natural recovery inherent in the body—a similar statement has been made by writers on the principle of medicine in all ages".[4] "The body *does* possess a means and mechanism for modifying or neutralising influences which it cannot directly overcome." [5]

[1] Binet, *Animal Magnetism* (International Science Series), p. 354.
[2] Sir B. Ward Richardson, *Asclepiad*, 1886, p. 267.
[3] *Ibid.*, p. 284.
[4] J. Mitchell Bruce, *Practitioner*, vol. xxxiv., p. 241.
[5] *Ibid.*, p. 248.

"Whatever other theories we hold we must recognise the '*vis medicatrix naturæ*' in some shape or other," says Professor O. W. Holmes.

"Je le ponsez et Dieu le guarit" (I dressed the wound and God healed it) is written by Ambrose Paré on the walls of the École de Médecine at Paris. "Nature is the physician of disease," says Hippocrates. "Reason dictates that disease is nothing else but nature's endeavours to thrust forth with all her might the morbific matter for the health of the patient" (Sydenham). This is more true of the symptoms than of the disease itself.

"A natural power of the prevention and repair of disorders and disease has as real and as active an existence within us, as have the ordinary functions of the organs themselves."[1]

"The evidence that the brain cortex regulates absorption, secretion, vascular tension and the anabolic and katabolic process in the cells of the tissues may now be regarded as complete. Sores in many melancholics will not heal. Gland and lung tissue in idiots and dements are unable to resist the attacks of the tubercle bacillus, so that two-thirds of our idiots and one-third of our dements die of tubercular disease."[2]

Examples of curative power of unconscious mind.

Consider the following very remarkable facts in proof of the guidance the unconscious mind exercises over the growth and nutrition of the body. In extreme old age the bones are wasted, thinned and softened. But the bones of the

[1] J. Mitchell Bruce, *Practitioner*, vol. xxxiv., p. 242.
[2] Prof. Clouston, *British Medical Journal*, 18th January, 1896.

skull will be found thicker than normal. A little consideration will show that there must be a centre able to arrange the manner in which the new bone is deposited so as to ensure the safety of the brain, even to the detriment of less important structures, in a manner not merely mechanical.

Self-protection of the organism.

"In rickets the organism does not get enough lime salts to build up the skeleton of its normal strength. It, however, tries to make it as strong as possible by the formation of bone at the growing lines, along the concavities of curves and at such other parts as transmit a greater proportion of weight. Most that is seen in rickets is the result of the effort made by the organism to render the ill-nourished skeleton able to perform its mechanical work. Except for this effort life could not be carried on. In the skull the activity of the organism in meeting the condition of softened bone is enormously and efficiently increased. Observe here how effectually nature makes the best application with its very imperfect material. The bone is most abundant where it is most wanted."[1]

This selective action of the "organism" forms no part of any property of matter, but is essentially a psychic quality; in short, nothing but the action of the unconscious mind.

Professor Laycock points out that "if the attention is daily directed to an opaque cornea during a hypnotic

[1] W. Arbuthnot Lane, *British Medical Journal*, 7th Nov., 1896, p. 1365.

trance, a deposit of lymph is observed to form according to Müller's law, 'that a structural defect tends to be removed by an act increasing the organic action of the part'".

Further instances.

In aortic obstruction we get hypertrophy of the left ventricle, as also in a regurgitant mitral, compensation always occurring where the disease cannot be removed.

A blow "below the belt" is rarely fatal if expected. The eye warns the mind what is coming, and the abdominal walls instantly become rigid without conscious knowledge. Also in peritonitis the walls become rigid to protect what lies beneath.

The swarming of leucocytes after bacteria, and the purposive manner in which they work their way to the seat of war, speak of the intelligent protective mechanism of the body, of which innumerable other instances might be adduced.

But beyond protective mechanisms, we must give some further testimony as to the power of the mind over definite disease, with which we will conclude this chapter.

"To check," says Professor Clouston, "diseased conditions we cannot do better than stimulate the cortex, and strengthen the mental energy."[1]

Protection and curative power of mind.

"Those predisposed to special disease find a sound and well-working mind and cortex their great protection. When disturbed in mind they fall victims to their diathesis. *I have no doubt myself* this is the strongest of all the forces from within

[1] Prof. Clouston, *British Medical Journal*, 18th Jan., 1896.

that preserve health and protect from disease. For the healing, as well as the prevention of disease, a sound cortex and a cheerful and a buoyant mind are all-important."[1]

"The imagination is one of the most effective psychical agencies in modifying the conditions of health and disease." (Professor Hughes.)

"A malady induced by mental reflex can only be cured by mental remedy. A full recognition of the value rightly attaching to the mental treatment of physical ailments will improve the usefulness of the physician and materially assist in the recovery of his patients. In disease, functional or organic, the therapeutic value of faith and hope, *though not in our text-books*, is often enough to turn the scale in favour of recovery."[2]

Science prefers a physical to a psychic cure.

Dr. A. T. Myers says: "In examining a patient in a modern hospital we rely on observable and measurable facts, less on the patient's own statements of what he feels, least of all on his theories how he came to feel it. In doctoring him we rely much on definite operations and on those few drugs whose action on the body we can prove, little on the patient's prayers for recovery, least of all perhaps on the encouraging words we throw in. Yet cures have always been effected by other than physical means. Either these can be referred to physiological means which have escaped detecting, or they cannot, and have

[1] Prof. Clouston, *British Medical Journal*, 18th Jan., 1896.
[2] Editorial, *Lancet*, 1883, vol. i., p. 19.

a psychical basis. The former of these alternatives is what science desires, but the second of the two alternatives at present holds the field; and we are forced to recognise in these cures a true psychic action. Self-suggestion is gradually supplanting all other formulæ in psychic therapeutics." And further,

"The functional trouble in organic disease of the nervous systems often exceeds the field of the anatomical lesion, and for this trouble psycho-therapeutics may be powerful".

Cures by imagination are not imaginary cures.

Because effects, however, are produced and cures performed by means of a mental condition, called by some the imagination (by us the unconscious mind), it is constantly assumed that these results are imaginary; in other words, that they are all fancy. This is much to be deplored, and we would expose so mischievous an error. It is generally implied that these phenomena are of a merely functional character, dependent on the state of the mind, more especially the will; and that a change of mental condition has been naturally followed by a change in the phenomena. This is what the orthodox medical practitioner means as he complacently smiles and asserts it was all the effect of the imagination. But he must remember a cure by the imagination is by no means the same as an imaginary cure.

"As the state of the mind is capable of producing a disease, another state of it may effect a cure." (John Hunter.)

It would be interesting to know how much of the

immunity medical men may enjoy from disease of an infectious character arises from their forgetting to be afraid.

"Psycho-therapeutics is unconsciously made use of by all with reputation in the medical profession. The fee even has a distinct psychic signification, for we are accustomed to value an article according to the cost of obtaining it."[1]

We will reserve further evidence to the next chapter, where we will also give some selected samples of various mental cures. With regard to what has been given, we would ask special attention to the important and weighty extracts from the *Lancet* and the *British Medical Journal*, and also to the words of Professor Clouston.

It seems to us wholly impossible to resist the fact that the force so constantly alluded to is everywhere psychical, that is mental in its origin. It is obviously exercised unconsciously, and therefore falls under one of our two formulæ, "mind used unconsciously," or "the unconscious mind".

[1] Dr. G. M. Roberts, *Lancet*, 1892, vol. ii., p. 657.

CHAPTER XIX.

THE UNCONSCIOUS MIND AND THERAPEUTICS, II.

CONTINUING now our testimonies to the power of mind over disease, Sir Andrew Clark says: "It is impossible for us to deal knowingly and wisely with various disorders of the body, without distinctly recognising the agency of states and conditions of mind, often in producing and always in modifying them".[1] "The reaction from the ancient metaphysical view of medicine has been carried too far."[2] This last refers to the switchback method of progress common to human science, already alluded to.

General power of mind on disease—Sir A. Clark, Dr. Morrison, Sir B. W. Richardson, Prof. Bowen, Sir J. C. Browne, Prof. Ford, etc.

"Up to the very gates of death I maintain that a sanguine, cheerful and hopeful expectation is infinitely more useful, and more warrantable on the part of the physician, than a brutal candour, which may cut the slender thread that holds the vital powers together."[3]

"In actual danger of death, the sense of safety is often a saving cause."[4]

"After poisoning their patients with drugs through many centuries, the doctors have at last come to know

[1] Sir A. Clark, *Lancet*, 1855, vol. ii., p. 315.
[2] Dr. A. Morrison, *Practitioner*, 1892, p. 25.
[3] *Ibid.*, p. 40.
[4] Sir B. Ward Richardson, *Asclepiad*, 1890, p. 333.

their business better, and now generally stand aside, so as to leave free course to the curative agencies of the unconscious, which alone can restore the patient to perfect health."[1]

"The success or failure of a practitioner will often depend as much on experience as a medical psychologist as on skill in simples."[2]

Value of deliberate suggestion.

Dr. Rush never prescribed remedies of doubtful efficacy in the various stages of acute disease till he "had worked up his patients with a confidence bordering on certainty of their probable good effects. The success of this measure has much oftener answered than disappointed my expectation."

"In neglecting the systematic and scientific employment of mental influence in the course of disease, medical practitioners throw aside a weapon for combating it, more powerful than all the drugs in the Pharmacopœia."

Speaking of medical consultations, Dr. Morrison says: "This takes us into the holy of holies in the life of a physician and his patients, when heart and mind can be laid bare to the gaze of a fellow-man, whose discretion can be relied on, and who may from his training in the knowledge of the human soul as well as the human body, be able to relieve or cure his brother of a disturbing factor in this life, beyond the reach of the most advanced therapeutics of a purely physical kind".[3]

[1] Prof. Bowen, *Modern Philosophy*, p. 439.
[2] Sir Jas. Crichton Browne, *British Medical Journal*, 1889, vol. ii., p. 400.
[3] Dr. A. Morrison, *Practitioner*, 1892, p. 27.

We now pass on to instances :—

Examples in heart disease, etc.

Sir Thomas Grainger Stewart says : "In heart disease the most important element is rest. Second in importance is perhaps the element of hope. If a patient becomes persuaded that he may recover, that good compensation may be established, he becomes more hopeful about himself and his heart benefits correspondingly. If a patient is gloomy and despondent, this damages the organ in a way we cannot at present fully explain."

"A lady suffered from organic heart disease and rapidly developed dropsy, from distress at the misconduct of her husband, and was in imminent peril of death. At this crisis she lost her reason. The disturbing mental factor (of disease) being eliminated, the balance of the labouring circulation quickly righted itself."[1] This is a very remarkable proof of the mental factor.

Professor A. Ford says : "During the summer of 1891 I met an attendant K. from Würtemberg while I was lecturing at Zurich, who had constant headaches for two years after a severe pneumonia. The physician there told him these headaches would never leave him, as they were an inheritance from his father ; and he had never lost them, always feeling a dull pressure on the head. This showed the two years' headache was nothing else than the result of an unconscious suggestion of the physician. The man had only had the

[1] Dr. A. Morrison, *Practitioner*, 1892, p. 29.

most temporary headaches before. I then told him definitely that headaches were not an inheritance, and could easily be cured. Since then (four months) the chronic headache has disappeared." "This case," he continues, "seems to be very instructive because it shows how easily physicians, without knowing it, can produce sickness by pessimistic prophecies, by anxious looks or words. Thus are diseases suggested (unconsciously) by the physician!"[1]

"I myself," he says, "have committed the same fault. A female attendant suffered with pains in the stomach. I diagnosed and treated her anxiously for gastric ulcer. For months she kept her bed, and gradually recovered with the stomach very sensitive for years. I have not now the slightest doubt that her long sickness was produced by over-anxious investigations and strict regimen."[2]

We think many physicians as they read this will search their own memories and find recorded there more than one parallel case.

I will now give an instance of the value of a new curative agent from my own experience:—

Therapeutic value of the clock.

I refer to the therapeutic value of a striking mantelpiece clock. (I say clock in preference to watch, because it has a greater value; and I say mantelpiece instead of hall clock for the same reason; and I add striking as being of still greater efficacy.) Sir Dyce Duckworth, without dwelling

[1] Prof. A. Ford, *American Journal of Psychology*, vol. iv., p. 4. [2] *Ibid.*

on the value of mental therapeutics, has pointed out its use by means of the clock, in showing the great effect in cases of persistent vomiting in giving the liquid food in teaspoonfuls every five minutes by the clock. If the patient is told that the food thus given will be retained, and if he can see the clock clearly from the bed, it will probably be successful; for at the exact time the sub-conscious mind enables the stomach —probably by some inhibitory power over the vomiting centre in the medulla—to retain the food.

Some years ago I tested its value in labour in 200 uncomplicated cases. I often found the uterine contraction very irregular and slow, but discovered, by impressing the patient with the fact that a contraction would and must begin every five minutes by the watch and last two minutes, giving three minutes' interval, that, after a little assistance at first, I could ensure in the case of a patient of average mental power a contraction commencing exactly when I said the time was up. I calculated, of course roughly, that my attendance at the 100 cases tried thus with suggestion was shortened an average of two hours each, as compared with the 100 left entirely to nature. Of course it is obvious this calculation is open to many errors, but the fact of the value and power of unconscious mental action or suggestion is not, for it was clearly evidenced. This induced action by means of the patient's own unconscious mind must be carefully distinguished from the physical force or mechanical aid so often used so disastrously. The one is, in a sense, natural, the latter purely artificial,

In the nursery, again, the clock is a very foundation of health. Food given by it agrees, without it disagrees. Sleep regulated by it is easily obtained, irregular bedtimes are bad. Its value, also, is that it tends to produce habits of the utmost value to the young child. I will give one instance of its power in old age :—

A patient about seventy years of age came to me in deep distress about her obstinate constipation, which was so severe that every enema and pill had failed, and mechanical evacuation was the last resource. This condition had continued for some years, a trained nurse living in the house. The patient was of exceptionally powerful mind and will and remarkable intellect. Seeing this, I relied upon the clock as an efficacious aperient. I explained the power of an exact habit over the bowels, and told her she would be cured if at 9·30 exactly by the clock on the mantelpiece she sought relief each morning. She was at first aided artificially at the exact hour, but after a few mornings when 9·30 arrived, and she was taken out of bed, a natural action was obtained, only she sometimes wanted to relieve them before the hour. This was never allowed ; she was told that to be too soon would prevent the cure as much as being too late. At the end of six weeks the bowels were daily relieved without medicine at half-past nine exactly by the power of sub-conscious habit ; and at the end of six months she had never missed a day. She has now no further trouble. I mention this case, for it shows the power of mental therapeutics even in the decline of life.

Now as to the curative effect of the patient's own conscious suggestion to the unconscious mind, and through it on the body.

Effect on unconscious mind of conscious suggestion.

"In 1837, Pastor Chiniquy got severe typhoid fever in Canada, and four physicians told his bishop there was no hope of his recovery. On the thirteenth day they said he had only a few minutes to live, and his pulse could not be felt. He then in a vision saw his favourite saint, St. Anne, to whom he cried for cure with every power of his soul, and he heard her say, 'You will be cured'. He recovered, and Quebec rang with the miracle. He was examined by two Catholic and two Protestant doctors. Dr. Douglas, a Protestant, showed Chiniquy his recovery was due to his being a man of remarkably strong will, and determination to resist death; that the will had a real power over the body, and his strong will had conquered. Chiniquy listened but preferred his saint, and had a votive picture painted of her for £50. A priest who saw it then told Chiniquy the cure was no miracle, and that most of the crutches hanging round the church were left by impostors; and the rest by those cured by the power of the mind over the body.

"Till 1858 that picture, representing the saint telling Chiniquy he would be cured, was in the church. In that year he again got typhoid fever in Chicago, and once more was given up as dying. But this time he did not cry to the saint, but made a determination to get better and soon felt life returning. He then saw

the saints had no part in his previous cure, and took his picture down and burnt it." [1]

Suggested in typhoid fever.

The above, even if not accurate in all details, contains, I am sure, a great truth. I had some time ago a favourite nurse who always had a superstition she would die of typhoid fever. She contracted it nursing a case of mine, and lay in a county hospital apparently dying; in the third week of the disease, in a low typhoid condition, and with every appearance of collapse, but with the mind clear, I went in to see her for the first time, and found her so. She told me she was about to die, and I said, "Certainly". She looked up and said, "Yes, but I mean it; I always said I would". And I said, "Then of course you will". She stared and said, "Don't you mind?" I said, "What's the use of minding? You are going to die if you say so." "My saying so doesn't make it," she said. "Perhaps it does," I replied, "for if you said you wouldn't die you would probably live." I saw as far as I could judge she had reached that point when the throwing of the will into either balance would determine the issue. "Do you mean that?" she said. "Yes, I do," I said, "and what's more, unless you do it I won't come and see you again. It is now 11·30, and if *now*, at this hour, you turn your mind the other way, and determine to live and not die, I'll do all I can to help you. You shall have another nurse, and I'll get the doctor to let you have

[1] *Life of Father Chiniquy*, revised edition, London.

a little champagne. But this resolve must come from you." She looked me hard in the face, and, seeing I meant it, and believing me, she said in deepest earnestness, "I will"; and from that hour she was a changed woman, and soon got well. I firmly believe that interview saved her life.

Mental therapeutics. Further examples.

A gentleman in Manchester, at an hotel in 1869, *en route* for London, was seized with rheumatic fever. He had fearful pains, high fever, profuse perspiration and all the symptoms of the disease. Being, however, most anxious to return to London in spite of all, he persisted in being carried to the night express. There was a serious collision, in which he was terribly frightened, but not hurt. He had to walk some distance in the cold, but all symptoms had gone, and the fever had disappeared.

A hopeless epileptic never had another fit after seeing his own daughter burnt to death.

In *Fraser's Magazine* for May, 1873, there is an apparently perfectly authentic story of a case of whooping-cough cured by a good thrashing.

Dr. Buckley records this case. "A doctor was called to see a lady with severe rheumatism, and tried to extemporise a vapour bath in bed, with an old tin pipe and a tea-kettle; and only succeeded in scalding the patient with the boiling water proceeding from the overful kettle through the pipe. The patient screamed 'Doctor, you have scalded me,' and leaped out of bed. But the rheumatism was cured, and did not return."

As examples of cures by faith in the personal power

of man we may cite the case of the power of the touch of kings to cure sickness. Dr. Carpenter tells us, concerning Charles II.: "Some of the principal surgeons of the day certified that the cures were so numerous and rapid that they could not be attributed to any natural cause".

Faith in personal influence.

A very curious case of the belief in the person is in the person of Dr. Tuke himself, and in connection with the extremely prosaic and apparently organic disease of "warts". Having heard of "wart cures" by faith, and being at an asylum on an official tour (where, of course, he was the great person, and in the eyes of the poor inmates, possibly almost divine), he happened to see several afflicted with warts, and he solemnly predicted to the sufferers by what day each wart would have disappeared. He quite forgot the circumstance, but, on his next round, was agreeably surprised by the hearty thanks of his patients, who had been cured so near the time predicted that his fame as a "wart-curer" was firmly established.

A second class consists of cures effected by faith in the mental power or influence of man.

Faith in magnetism and "mesmeric fluid".

In 1771, a Father Hell, in Vienna, performed numerous cures by the application to the body of steel plates of a peculiar shape that were supposed to transmit some magnetic influence. Another Viennese, called Mesmer, used these methods with several variations till one day, operating on a young lady, the idea struck him that he could dispense with these plates altogether, and could effect the

cure by passing his hand continually close to the patient, and thus conveying the magnetic fluid from his own body to her. His house was soon crowded by the fashionable women and men of the day, who were cured—in many cases undoubtedly so—in great numbers.

He left behind him an ardent disciple, who firmly and honestly believed in the "magnetic fluid," a Marquis de Puyseque. This disciple improved again on Mesmer by transferring his magnetic fluid permanently to a common labouring man, who had now such an "enlarged soul" that he performed in his turn miraculous cures, and, seeing also that Mesmer could transfer the fluid to stone and wood, he argued, "Why not to a whole tree at once?" So he mesmerised a large tree, every leaf of which he declared and believed to be full of magnetic curative fluid. Circular rows of benches were placed round it and ropes attached to every part, and as many as 150 or 200 people would sit from morning till night, holding these ropes and being—in many cases really—cured of their diseases.

This cure spread to England, and in 1789 a Mr. Southenbourg, a painter, and his wife, cured by their "magnetic power," by simply touching people, innumerable cases, principally nervous sufferers. At one time a crowd of 3000 people besieged their house at Hammersmith, although their charge was from one to three guineas a case.

Faith in touch and "tractors".

A. B. D. Perkin, a surgeon in Leicester Square, performed innumerable cures on gout, rheumatism and

paralysis by two small plates of metal (like Father Hell's) which he patented, and sold at five guineas the pair. A friend built him a large hospital, and called it the Perkinian Hospital. And this might have flourished to this day, but for Dr. Haygarth of the Bath Hospital, who, suspecting "faith" was the agent, had wooden "tractors" painted like steel, and got just as good results, curing four out of five rheumatic patients at once.

Faith-healing at Lourdes, etc.

As to cures effected by charms, and faith in the supernatural, Ferrassi cured in one year fifty cases of ague by a charm, which consisted of a slip of paper with the word "Febrifuge" written on it, one letter of which was to be cut off with certain rites each day. A Spanish lieutenant recovered at the "f".

Livy tells us that the temples of the gods of Rome were rich in the number of offerings which the people used to make in return for the cures received from them; and Pliny tells of Etruscan spells used by Theophrastus for sciatica, by Cato for the cure of dislocated limbs! and by Vario for gout. Our own Druids, using similar methods, were consulted by the Emperor Aurelius.

M. Macary, joiner of Lavaur, was certified by Dr. Rossignol and Dr. Sequi, physicians of Lavaur, in August, 1871, as follows (translated):—

For thirty years, M. Macary, joiner, has been suffering from varicose veins in the legs; the veins, which were of the thickness of a finger, were complicated with knotty flexion cords, and

required to be methodically compressed by bandages and dog-skin gaiters; ulcerations were frequent in both legs, requiring frequent rest and long treatment.

On 19th July, 1871, a friend then brought Macary a quarter of a pint of Lourdes water, with part of which he moistened the leg and drank the rest with perfect faith and earnest prayer. At midnight he woke, the lumps were gone. In the morning all was healed. The certificate proceeds :—

> We have examined him to-day, and the varices have suddenly disappeared; leaving no other traces of their presence than a nodosity, sensibly diminished on the lower and upper part of the right leg.

The signatures of the two medical men are certified by De Voisin, the mayor, and M. Cellieres, the sub-prefect of Lavaur.

Faith in Christian science.

The husband of a patient of mine dining with a Christian scientist, spoke of his varicose veins for which he had worn bandages for months. She offered to cure them, though he was sceptical. In a day or two, to his surprise, they disappeared; and though I have not seen him myself, my most trusty nurse has, and says he has left off all bandages, and is constantly blessing the Christian scientists for the cure.

To us knowing the power of the unconscious mind, these cases can clearly be accounted for by its action. It is interesting, however, to note in passing what these mind-healers require their adherents to believe. We quote from Mrs. M. B. Eddy's work (2 vols., 8vo) :—

"Argue with the patient: You have no disease, you are not in danger; you have nothing to fear, and are perfectly well! and you will find it soothes the symptoms of any disease! If the disease is consumption, begin your argument by showing that inflammations, tubercles, hæmorrhages, and decompositions are but thoughts, beliefs, mental images, before mortal mind, not the immortal mind. Drugs, cataplasm and whisky (!) are shocking substitutes for the dignity and potency of mind. Any abnormal condition of the bones is the action of mortal mind as direct as insanity. Bones have no more substance than thoughts, what we call matter was primitively error in solution." (! !)

The truth underlying all this "science" is here hard to find, but careful search may discover it.

We give now three remarkable eye cases; two being personally investigated.

Remarkable eye case from Lourdes.

The first is from Lourdes, and concerns a workman, Louis Bournett, who, for twenty years, had lost the sight of his right eye. Dr. Douzous attended him for years. One day he rubbed the eye with some muddy Lourdes water, and uttered a loud cry. His sight, hazy at first, was soon restored. He met Dr. Douzous, and told him he was cured. "Impossible," said the doctor, "the injury done to the eye is organic and therefore absolutely incurable. My treatment cannot restore your sight." "It is not you who cured me," said the man, "it is the Virgin." The doctor shrugged his shoulders, drew a note-book out of his pocket, and wrote a few words in pencil. With one

hand he closed the man's good eye, and held the small pencilled scrap before the blind one. "If you can read that, I will believe you." Bournett read aloud, "Bournett has an incurable amaurosis, and it will never be better". On this evidence Dr. Douzous and Dr. Verges of Tarbes deposed this was a *bonâ fide* "miracle".

Eye case personally seen from Yorkshire.

The *Christian Herald* of 4th November, 1889, stated that in a faith-healing meeting there was a Mr. George Evison who had had his sight restored after his eyeballs had entirely perished and left empty sockets. A medical man present confirmed the loss of the eyeballs. I heard of this but paid no attention to it until a well-known M.P. asked me to meet Evison at his house, he fully believing in him. I went and found a modest and retiring young man in poor health, but who could see well enough out of small blue eyes. He told me his story with great simplicity; the M.P. vouched for its substantial truth. He said he had had, since a boy, suppurating disease in both eyes, and had been attended by the well-known oculist Taylor, of Nottingham, in vain. After a time, he says, he lost both eyeballs entirely, and, living with a chemist, he was made a sort of show of; hundreds of people putting their fingers into the empty eye-sockets. He felt the cold in these extremely. He then attended a Salvation Army meeting where a faith-healer was present, and was told and believed that he would receive new eyeballs. He felt the orbits getting warmer, and soon a pair of new eyes "grew," at which Evison did not seem in the least surprised, but very grateful. He

then saw for the first time for many years, learned to read, married, and his wife was in the room when I saw him. Amongst others, I believe Mr. Washington Moon knew his case well. I examined his eyes and found adherent irides, significant of past disease, so that whatever had happened these were not "new eyes"; and I then arranged with him to go with me to consult Mr. Hutchinson in Cavendish Square. He agreed, but shortly after I got a letter from Brighton saying he couldn't come up, and soon after he died of rapid consumption. The case, though probably specific and no doubt unconsciously suggested, is still most remarkable.

The other is the case of blind Martha, who was well known with her white dog and stick in Paddington. She had learned reading by raised letters and had attended the blind schools. She could always perceive light, but could distinguish nothing further; of this I have sufficient evidence. She had been treated ineffectively at Charing Cross, Middlesex and Moorfields Hospitals, and told there was no cure for her.

Eye case personally seen in Paddington.

In 1882 she joined the Salvation Army as a soldier, her blindness exciting great compassion but remaining uncured for seven years. On 25th March, 1889, a Major Pearson, an aged army officer, held on his own account a "faith-healing" meeting, in the small local barracks in the Portobello Road; deriving, as far as I can ascertain, no pecuniary benefit whatever from so doing.

Martha D—— told everybody she should receive her

sight that night, and started off telling the people she should never need her dog and stick again. At the meeting she was seated in front, with other cases of blindness, lameness, etc., who, by the way, were all healed, one girl, S—— D——, now in Australia, also regaining her sight. Martha's account is that her closed eyes were rubbed violently by Major Pearson for some minutes, and then she looked up, and saw for the first time clearly for many years. She was astonished to find the people's faces so big. She walked home, and never used her stick or dog again. She got a place as nurse girl, and I called and saw her there. She had to walk over a mile each day to the house and take the children out in the perambulator. She could then tell colours and objects readily, and was learning to read.

Opinion of oculists on the case.

I took her first to a leading oculist in Queen Anne Street. He found both lenses gone, probably through cataract in infancy, and the eyes extensively diseased internally. His theory of the regained sight was that an opaque capsule, traces of which he saw behind the iris, had been accidentally ruptured by the rubbing, and thus the sight was partially restored. He ordered her glasses, which greatly improved her vision.

Another oculist did not think the "cure" could be so effected, but made no other suggestion. A third, in Cavendish Square, said there was no sign of any recent change having occurred in the eyes, but that it is likely that previously she saw better than she thought she did, and that now she thinks she sees better than she

does, and that the improvement is really due to nervous (*i.e.*, mental) causes. For two years after I had the girl under constant supervision, and found that as her religious zeal gradually declined, so did her sight get dimmer.

I think from such cases as these, and the fact that the hypnotic state is generally produced through the eyes, that there is a closer connection of the mind with sight than with the other senses.

Further instances of mental therapeutics.

At the siege of Breda, in 1625, the whole garrison was down with scurvy. The Prince of Orange smuggled into the town three small phials of essence of camphor, and his physician put three or four drops into a gallon of water, and the men recovered and saved the town.

As to this, we may remark that it is a matter for curious conjecture as to how far generally the cure we now attribute to drugs will be soon considered to be due to psychism.

One test is open to all, and we specially recommend it to homœopaths and dispensers of vegetable electricities and similar attenuated compounds. Let the medicine be given wholly without the knowledge of the patient, or the presence or known advice of the doctor, or even prescribing friend, often a lady; and let it be carefully noted what are the results as compared with the same drug administered to the same person in the same disease with all the usual surroundings shortly after.

Sir Humphrey Davy, wishing to experiment with some

new preparation on a paralysed patient, put first a thermometer under his tongue. The man, believing this was the new remedy, soon felt so much better that Sir Humphrey told him to come the next day, and in a few days, with the thermometer applied for a few minutes each day, he was well.

Dr. Ranieri Gerbe, of Pisa, cured 401 out of 629 cases of toothache, by making the sufferers crush a small insect between their fingers, that he represented was an unfailing specific.

A surgeon took into a hospital ward some time ago, a little boy who had kept his bed for five years, having hurt his spine in a fall. He had been all the time totally paralysed in his legs, and could not feel when they were touched or pinched ; nor could he move them in the least degree. After careful examination, the surgeon explained minutely to the boy the awful nature of the electric battery, and told him to prepare for its application next day. At the same time he showed him a sixpence, and, sympathising with his state, told him that the sixpence should be his if, notwithstanding, he should have improved enough the next day to walk leaning on and pushing a chair, which would also save the need of the battery. In two weeks the boy was running races in the park, and his cure was reported in the *Lancet*.

There are several recorded cases of dropsy entirely disappearing through fear.

A young lady who had taken ether three and a half years before, on the inhaler being held three inches

away from the face, and retaining a faint odour of ether, went right off, and became unconscious without any ether being used or the inhaler touching her face.

Mental cures in nerve cases.

A woman was brought on a couch into a London hospital by two ladies, who said she had been suffering from incurable paralysis of the spine for two years, and having exhausted all their means in nursing her, they now sought to get her admitted, pending her removal to a home for incurables. In two hours I had cured her by agencies which owed all their virtue to their influence on the mind, and I walked with the woman half a mile up and down the waiting-room, and she then returned home in an omnibus, being completely cured. An amusing case is that of a paralysed girl, who, on learning that she had secured the affections of the curate, who used to visit her, got out of bed and walked —cured; and afterwards made an excellent pastor's wife.

A remarkable instance of this sort of cure is that of a child afflicted with paralysis, who was brought up from the country to Paris to the Hotel Dieu. The child, who had heard a great deal of the wonderful metropolis, its magnificent hospitals, its omnipotent doctors, and their wonderful cures, was awe-struck, and so vividly impressed with the idea that such surroundings must have a curative influence, that the day after her arrival she sat up in bed much better. The good doctor just passed round, but had no time to treat her till the third day; by which time when he came round she was out of

bed, walking about the room, quite restored by the glimpses she had got of his majestic presence.

Hysteria.

Hysteria is a disease that manifests itself either in exaggerated emotional displays with fits, or in the accurate but unconscious mimicry of definite disease. It will therefore be seen that it is widely different from "nervousness" with its long train of well-marked nerve symptoms that suggest no disease but the one that is there. In hysteria proper, there is no intention to deceive; and it must carefully be distinguished from malingering or shamming, which is a direct attempt at fraud, and for which no contempt or ridicule can be too severe. The essential difference which we may here point out definitely, is that in the former the power that perfectly produces the symptoms of the hysterical disease is the unconscious mind, an agent of which the sufferer is necessarily wholly unconscious. In the latter, the agent that clumsily feigns some disease is the conscious mind, for the action of which the patient is cognisant and responsible.

Cases of hysteria occur usually in an ill-balanced or starved brain; so that instead of showing the natural symptoms of a nerve disease that exists, it sets in vibration centres of motion and sensation that simulate some special disease, which the patient and doctor often suppose to be the real one, thus drawing "a red herring across the trail". It often begins in some slight but real disease in a person with an ill-balanced or worn-out brain; and this slight but real disease sets up a train of associations that produce a true "hysterical"

disease, or a disease the seat of which appears to be in the body, but is really in the brain. Hysteria is most common in the spring, when the nervous system is least well-balanced. It is common in the under- and over-worked, in the badly trained and imperfectly educated; in boys from ten to fourteen, in girls from sixteen to twenty-five, and in spinsters at any age.

Over-education and subsequent idleness combined, are fertile causes. It is often found in people otherwise strong-minded and clever. The mental characteristics found in these sufferers are thus described by Dr. Buzzard:—

Characteristics of hysteria.

"Intelligence good, apprehension quick, memory good, judgment weak, no ability of concentration of thought for any length of time. Accuracy and perseverance are deficient. Emotions too easily excited and incapable of control. The expression of emotion is incongruous; tears at ridiculous subjects and laughter at tragic. There is great desire for the sympathy and attention of others. Sometimes there is exaggeration in varying degree, which, however, is probably a part of the disease."

This last point must be noted. For while there can be no doubt that many of the feelings, such as pain, are exaggerated, we must remember on the one hand that they are certainly felt; and that the very exaggeration is a proof, not of fraud, but of the ill-balanced working of the judgment and perceptive powers of the brain.

We have already given some cases that may come under the head of hysteria, including some of paralysis

and spinal pains, which are so exceedingly common that there is no need to give further examples. Suffice it to say that there is no form of paralysis that is not simulated by hysteria, from the loss of power in a single finger or joint to the total paralysis of one side, or of both legs, or of the entire body. The pain may be in any part of the spine, but is generally about the "small" of the back.

Hysterical paralysis.

In hysterical paralysis, the muscles, as a rule, do not waste much, and no bed sores ever form. If the helpless limb is bent, it often remains so; which it would not in true paralysis.

This paralysis may also affect any or all of the special senses. It may cause such total loss of taste for years that the most nauseous substance can be eaten without knowledge. It may cause total loss of smell, so that neither garlic, coal gas, asafœtida, nor otto of roses can be smelt. It may cause squint of one or both eyes, or colour blindness, or any sort of imperfect sight. It may cause deafness in every degree. It may cause loss of feeling or touch anywhere, and the part may be pricked or cut without being felt. All this is within my personal knowledge.

Tumours of all sorts are simulated with a fidelity that is absolutely startling, and skilled doctors are constantly being deceived. They may occur in any part of the body, but are most common in the breast and abdomen. In the breast severe pain is complained of, and a hard mass may be felt, which, however, disappears if the hand be laid flat

Hysterical tumours.

upon the part. Not so, however, with those in the abdomen. Patients with these perverted nerve centres have an unconscious power of either contracting part of a single abdominal muscle so rigidly that it forms a hard, round, solid swelling, plainly perceptible; or they can spasmodically contract the digestive canal at two points so as to imprison between them a largely distended portion which, being partly movable and easily felt in the abdominal cavity, is exactly like an abdominal tumour. If the person be thin and the tumour be pressed down or resting on the aorta or great artery within, the pulsations from the blood-vessel are so perfectly communicated to the false tumour that it is believed to be an aneurism. I am told by one of our best known physicians that over fifty cases have been sent in to his wards of this form of pulsating tumour, known as abdominal aneurism, all of them, previous to admission, having been examined and certified to be such by medical men, and yet, on further examination, every one of them turned out to be of hysterical, and not local, origin. The only way in which they can, in many cases, be found out, is by chloroforming the patient, when the tumour generally disappears, but, of course, returns immediately the patient regains consciousness. I remember in hospital practice one special case of this sort under my care of a woman whose whole abdomen was greatly distended by a supposed tumour of enormous size. Under chloroform it at once disappeared, but on regaining consciousness there it was as large as ever. The woman

was not, therefore, "cured," and it was no comfort to her to know that when she was unconscious the swelling was not there; all she wished was to be relieved of it. I therefore put her under chloroform again, and, while under, tightly bound her round with plaster-of-Paris bandages that I allowed to set as hard as stone before she came round. This time, of course, she could not expand, and the "tumour" was gone. She was delighted we had "removed" it; and after keeping the bandage on three weeks, it was taken off, and the woman left, most thankful to be relieved of her distressing complaint.

Other simulated diseases.

A young lady tottered into the out-patient department of one of our large London hospitals the other day, followed by her mother in an agony of mind, having an open tin of "Brand's" in one hand and a spoon in the other. She had brought this because her daughter was dying from a contraction of the gullet, and she wished to show us that not even a little jelly could be swallowed. The girl was reduced to a skeleton, and would certainly have died from pure hysteria if not relieved. Here I may say that I am often asked if people ever die from a purely hysterical affection, and my answer is, "Undoubtedly they do". After using appropriate means to affect the mind indirectly, in about half an hour she was sitting in one of the wards eating a large plateful of boiled mutton, potatoes and turnips, with "hospital pudding" to follow.

A matron of an important institution had to resign

her post and a large salary through total loss of voice. Examination showed that this was hysteria, for when she coughed she made a sound, and the vocal chords were perfect in action. Appropriate means in a fortnight completely restored the lost voice.

Hysterical loss of voice.

Hysterical vomiting is very common, and often persists for months; the patient, however, does not lose as much weight as would be expected. The appetite may be greatly perverted; it may be enormous, or entirely absent, or depraved, all sorts of things being swallowed. Symptoms of obscure diseases, such as hardenings or softenings of the spinal cord, that could not be known consciously to the patient, and consisting of tremors, rigidity, spasms, etc., in special parts of the body, are produced by hysteria, and may persist for months; and only slight inconsistencies reveal that they are hysterical after all.

But perhaps we have said enough to show the protean nature of this extraordinary and distressing disease.

The first thing obviously in the cure of advanced hysterical disease is to remake, as far as possible, the vitiated body and brain with fresh flesh and blood and nerve, and then, when we have put the patient into the best possible bodily health, we shall have cured the physical cause of the nerve disorder at any rate. Then, or even simultaneously, the unconscious mind must be made through consciousness, deliberately, scientifically and systematically to undo the evil it has done, and substitute good habits of thought and action for bad. This is done

Application of mental therapeutics.

mainly by suggestion, but without any of the doubtful and unpleasant accompaniments of hypnotism.

John Hunter gives a good hint here. He was asked to be magnetised, and being told he would feel it at the roots of the nails of his hand, he fixed his whole attention on his great toe, and so frustrated the phenomena. I employed this device successfully some years ago in the case of a girl with a contracted and withered arm which had been massaged and faradised, with the result of making it more and more rigid. I neglected it entirely, and fixed the attention on the other parts of the body by vigorous massage, etc., with the result the bad arm left quite alone got perfectly well.

It is important fully to understand that when the brain is restored to health by good nerve tissue and healthy blood, it can be made by suggestion to exercise as healthy an influence over the body as previously it exercised a harmful one. If ideal centres can produce ideal diseases, surely the rational cure is to first bring these ideal centres into a healthy condition, and then make them the means of curing the ideal disease. Mental disease requires, and can ultimately only be cured by, mental medicine. When will this be understood? And when will nauseous drugs cease to be ministered to a mind diseased?

Of the usual remedies given, Dr. Russell Reynolds says: "The whole list of anti-hysteric remedies—musk, castor, valerian, and the like—appear to have this one property in common: that they do no good, and delay

the real treatment of the case, which is not one to be cured by nauseous 'gums,' but largely by mental, moral and social management".

Tonics in helping to build up the new flesh and blood are, of course, valuable. Electricity, properly applied, is also a therapeutic aid we can seldom wholly dispense with, and the reason of its value is obvious, when we consider it is the most powerful agent that we possess for direct action on the nerves.

If the case be a severe one it must be withdrawn from all its surroundings during the cure, and afterwards, if these were bad, it must *never return to them again.*

Such are a few bare general principles of treatment. The details have to be varied to suit each separate case.

CHAPTER XX.

THE VALUE OF THE UNCONSCIOUS MIND.

In this concluding chapter we will sum up the general value of the unconscious mind to the organism, and the importance to science of a recognition of its powers.

The value of the unconscious mind (call it Nature, or Physiology, or Intrinsic Power, or Natural Function) extends, as we have abundantly proved by quotation and example, in all directions, some of which we will now consider.

Endeavours to exclude the unconscious.

We have seen how very strongly the idea is opposed by some psychologists, metaphysicians and philosophers. We have quoted language used by these in which the meaning of words is so strained as well-nigh to be devoid of sense. We have noticed continual contradiction in the writings even of our most determined opponents, and have pointed out that practically it seems impossible, even with the greatest pains, to speak of mental qualities without acknowledging unconscious psychic action. Some, it is true, are such sworn enemies of any mind but consciousness that they descend to assertions in defiance of evidence, such as "these powers must be material or purely physiological"; others to abuse, more or less

violent; others say they refuse to consider the subject at all; and one and all do their best to ignore, explain away, and by one means or another deny the phenomena, or at any rate the meaning and importance of the phenomena, manifested by unconscious psychism (if "mind" be objected to). Consider the deplorable results of such an attitude on their writings and on their science. It is just what must inevitably ensue, if there be indeed so vast a tract of mental powers left unexplored.

Enormous ingenuity is displayed in psychologies in the analysis of various states of consciousness, of all the passions and emotions, and of the various powers of the intellect and will, with the result that, while bewildered with the exhaustive analysis of every possible "state of consciousness," the student feels all the time that he never touches the bottom; that he gets no grasp of what the mind is; that questions suggested by his own experience are for ever arising for which he gets no answer; that a large part of his own mental life is untouched; that he is perplexed and confused by reading of "sub-conscious," of "below consciousness," of "subliminal," of "thresholds of consciousness," in books that at the same time deny in so many words "the unconscious". It is as if one took up the details and minutiæ of a science without ever understanding its groundwork or scope. Indeed the condition of psychology, as long as it refuses to recognise the breadth and depth and all-importance of the unconscious, can best be described in the

Present state of psychology.

words of Professor James, whom we quote once more as follows:—

"Psychology is but a string of raw facts, a little gossip and wrangle about opinions; a little classification and generalisation on the mere descriptive level; a strong prejudice that we have *states* of mind, and that our brain conditions them; but not a single law in the sense in which physics shows us laws. At present psychology is in the condition of physics before Galileo and the laws of motion, or of chemistry before Lavoisier."[1]

No language that we have used or could use is half so strong as this utterance by a leading psychologist of the state of a science that turns its back upon and seeks to deny the existence of more than half its subject-matter.

It has perplexed many why such an attitude should have been taken and persisted in so long. There is doubtless a great attraction in limiting states of mind to the illuminated disc of consciousness; little clear laws can be laid down, and definitions cut and dry, made within the fixed horizon bounded by consciousness; and there is moreover a deceptive appearance of accuracy in recording the results of a skilled interrogation of one's own consciousness, and in refusing all testimonies as to mind that are not arrived at and cannot be tested by this one process.

It has long since been seen, however, that this is far

[1] W. James, *Psychology*, p. 468.

from being the only method available for the investigation of psychic forces, and certainly is far from being as accurate and reliable as is generally supposed.

Value of the unconscious to philosophy, etc.

It is undoubtedly this clinging to introspection that is the cause alike of the crippling of psychology and the denial of the unconscious mind.

"Psychology ought to be the most interesting of all the sciences, and as a matter of fact it undoubtedly is so, though it has been greatly discredited by the imperfection of the method by which it has until very lately been studied. That imperfection is so great that it would hardly be an exaggeration to assert that nearly all the study and thought expended upon it down to the beginning of our own age, has been fruitless and as good as wasted, except inasmuch as it has at last made clear the impassability of the route men have sought to follow—the route, namely, of introspection."[1]

The first value therefore of the establishment of the fact that mental phenomena belong to mind equally, whether within or without the sphere of consciousness, is its capital importance in *philosophy*, *metaphysics*, and *psychology;* and when the whole mind is recognised, when its powers are studied and its laws ascertained, it will do much to raise the latter to that level of a true science which Professor James declares it has not yet attained.

Consider next the value of this truth in *Christianity*

[1] Dr. R. M. Bucke, Pres. Psychological Section, British Medical Association, 1897. See *British Medical Journal*, 11th Sept., 1897.

and *ethics*. Here language has ever striven to describe a territory in man's soul which was mind, and yet was not consciousness. "Deeper down, higher up, far behind, beyond, out of consciousness," are all expressions that have striven to indicate this district.

Value of the unconscious to Christianity and ethics.

It has been long felt that the doctrines of Christianity, of a new birth and nature, of the indwelling of the Holy Spirit, and even of conscience, are not directly realised within the sphere of consciousness. Also that the basis of ethics and all morality lies in a voice and judgment that speaks to us from the unknown within, however much its tones and words may be modified by circumstances and teaching derived from consciousness. The value therefore here of the establishing of the fact of the unconscious mind is immense, giving at once the key to all, and showing where our highest spirit-life and moral sense dwells, and whence proceeds the voice of conscience, and shall we say "of God"? We have shown elsewhere that unconsciousness may well include what has been called "*supra*" as well as "*sub*," for the unconscious mind is equally the home of the highest spirit-life as of the directing power of the lowest body functions. Surely this is the key to the "Jekyll and Hyde" in us, to the doctrine of the two natures, to the struggles that we often experience in the conflict between the good and evil within. I am persuaded when the scope of the psychic in us is fully recognised, it will throw great light on the foundations of ethics, and Christianity in the human soul.

Jekyll and Hyde.

Then with regard to *hypnotism* and the increasing range of spirit manifestation—forces that no modern psychology now ventures entirely to ignore.

Value of the unconscious to hypnotism, etc.

Their basis of operations is nothing more or less than the unconscious mind,[1] and whatever marvels lie in their operations are due to the power of exciting to action this hidden psychic force in the abeyance of consciousness; for if there be one fact above all others, that is essential in all true manifestations, it is that consciousness is dormant in the hypnotic state. Whether it be the production of a blister from a postage stamp, or the curing of some functional disease, both are effected by an agency which has power over body forces and sensations. Call this a second consciousness if you will, it is at any rate a consciousness of which in ordinary life we are wholly unconscious, and it is undoubtedly a psychic force; therefore it is proved that whatever we may call it when active in hypnotism, in ordinary life, it can be nothing more or less than unconscious mind.

Then to the *biologist*, comparative physiologist, and animal apologist, is not this doctrine both balm and light? Is he not worried to death over reason and instinct? And whether it be the almost superhuman cunning of an elephant or dog, or the marvellous display of passion and purpose

Value of the unconscious to biologists, etc.

[1] In one of the most recent works on hypnotism by T. J. Hudson (*The Law of Psychic Phenomena*), the unconscious mind is throughout described as a distinct psychic entity under the name of "the subjective mind".

in a rotifera, or an ant, he is equally at sea what to call it, so long as he is bound with the fetters, "Consciousness is mind, and all mind is consciousness". He knows and sees these powers are psychical. The more he studies them the more he revolts against any material mechanical agency being a sufficient cause.

Even the familiar actions of the decapitated frog are seen in a new light, if only he may speak of "an unconscious mind"; indeed, when he lays hold of this heretical formula his soul is in peace. It answers every question, and he sees how mind is gradually developed, and with the growth of the complex cortex, capped and crowned, both physically and psychically, with consciousness and reason in man (and perhaps also in a modified way in some higher animals as well), to say nothing of the impastation of spiritual and moral nature.

The real deliverance arrives when one is allowed to talk of unconscious mental action without rebuke.

So that here, too, where relief is so sorely needed, it is of great value.

Then, what of its value to *parents* and to *teachers?*

Value of the unconscious to parents, etc.

We have entered into such full detail on this in chapters viii. and ix. on the education of the unconscious mind that little need be said here. We have sought to prove that during the whole period of infancy and childhood, whether we know it or not, the education that is of most value to us is that which is received and stored by the unconscious mind; and that though all our educational

and training efforts may be directed to consciousness, through the ignoring or denial of the unconscious, nevertheless it is the latter that is acquiring the most knowledge. If this be the case, it is easy to see, as we have also shown, when our unconscious faculties receive their due recognition how much more can be done by the deliberate training and educating of this little known, and yet all-powerful, faculty, by means of the almost endless forces of environment, of habit, of suggestion, etc. Heredity, as we have seen, makes the unconscious mind of the new-born infant anything but a *tabula rasa*, imprinting it deeply with tendencies and capacities and passions that, unchecked, shall reveal themselves in due time to their owner's astonished consciousness. But in the education of the unconscious we have a greater force still. Herbert Spencer says: "A man is more like the company he keeps than that from which he is descended"; in short, environment, that arch-educator of the unconscious, is more powerful than heredity.

We must not linger again over the fascinating light that this truth throws on the value of country life, of native lore, of companionship with the wonders of creation, etc., of which it is the true and only key.

Turn to its value to the *individual*—his body, for instance.

Value of the unconscious to one's own body.

It has often been a mystery how the body thrives so well with so little oversight or care on the part of its owner.

No machine could be constructed, nor could any combination of solids or liquids in organic compounds

regulate, control, counteract, help, hinder or arrange for the continual succession of differing events, foods, surroundings and conditions which are constantly affecting the body. And yet, in the midst of this ever-changing and varying succession of influences, the body holds on its course of growth, health, nutrition and self-maintenance with the most marvellous constancy.

We perceive, of course, clearly, that the best of qualities —regulation, control, etc., etc.—are all mental qualities, and at the same time we are equally clear that by no self-examination can we say that we consciously exercise any of these mental powers over the organic processes of our bodies. One would think, then, that the conclusion is sufficiently simple and obvious—that they must he used unconsciously; in other words, it is, and can be nothing else than, *unconscious mental powers* that control, guide and govern the functions and organs of the body.

Our ordinary text-books on physiology give but little idea of what I may call the intelligence that presides over the various systems of the body, showing itself in the bones, as we have seen, in distributing the available but insufficient amount of lime salts in disease; not equally, but for the protection of the most vital parts, leaving those of lesser value disproportionally deficient. In the muscular system nearly all contractions are involuntary. Even in voluntary (so-called) muscles, the most we can do is to will results. We do not will the contractions that carry out these results. Muscles striped and unstriped are ceaselessly acting without the slightest consciousness, in maintaining

the balance of the body, the expression of the face, the general attributes corresponding to mental states, the carrying on of digestion and other processes with a purposiveness, and adaptation of means to new ends and new conditions, ceaselessly arising, that are beyond all material mechanism. Consider, for instance, the marvellous increase of smooth muscle in the uterus at term, and also its no less marvellous subsequent involution; observe, too, the compensating muscular increase of a damaged heart until the balance is restored and then it ceases, as does growth at a fixed period; consider in detail the repair of a broken bone. These actions are not mere properties of matter; they demand, and are the result of, a controlling mind.

In reproduction and circulation.

The circulation does not go round as most text-books would lead us to believe, as the result merely of the action of a system of elastic tubes, connected with a self-acting force-pump. It is such views as these that degrade physiology and obscure the marvels of the body. The circulation never flows for two minutes in the same manner. In an instant, miles of capillaries are closed or opened up according to the ever-varying body needs, of which, consciously, we are entirely unaware. The blood supply of each organ is not mechanical, but is carefully regulated from minute to minute in health exactly according to its needs and activities, and when this ever fails, we at once recognise it as disease, and call it congestion and so forth. The very heart-beat itself is never constant, but varies *pro rata* with the amount of

exercise, activity of vital functions, of conditions of temperature, etc., and even of emotions and other direct mental feelings.

The whole reproductive system is obviously under the sway and guidance of more than blind material forces. In short, when thoroughly analysed, the action and regulation of no system of the body can be satisfactorily explained, without postulating an unconscious mental element; which *does*, if allowed, satisfactorily explain all the phenomena.

Value of the unconscious to the conscious mind.

Then as to the value of the unconscious mind to *consciousness* itself, and to what used exclusively to be termed our minds.

We are all aware when we think at all, how dependent we are upon the unconscious; and the greater, the nobler, the more brilliant are our thoughts and qualities, the more is it obvious to ourselves that their origin lies beyond our ken. We continually hear voices within addressing us; we wish to do a certain thing, and are conscious of being opposed and hindered by some impulses from the unknown; or on the other hand we have no wish or desire to do a certain act which nevertheless we feel impelled by some hidden influence to do. We consciously see, hear, taste, touch, smell; but every object so perceived is at once apperceived unconsciously; in other words, our whole enjoyment and understanding of the light, or sound message, is derived from the added information respecting it at once given by the unconscious mind. As we have seen, *to us* by this means, a hard yellow circle is at once a

wedding ring with all its associations; which it is not to a child who has mere perception of it; a short black line is a needle with all its characteristics, at once unconsciously added to the mere perception, that alone is imprinted on the retina; a mere footfall causes our hearts to thrill, our pulse to quicken, our feelings to be joyful, all through apperception. Consciously we find ourselves endowed with tact, instinct, sense of the beautiful in art, in music, etc.; endowments that we all use and are grateful for, but use largely unconsciously, and of whose origin or dwelling-place we are wholly unconscious.

Value of the unconscious to the man himself.

The value of the unconscious not only to consciousness but to the *man* himself is enormous. It guides him aright when otherwise he would go wrong, it inspires him, it warns him, it furnishes him with names, facts, and scenes from the stores of memory. It is really not only the guiding power of the body; accomplishing tasks so intricate, that no conscious mind, even if it had the power, has the capacity for; but it also guides behind the scenes the direction of his thoughts, his tastes—in short, not only his physical, but largely his psychical life.

Listen to Hartmann on the subject.

"The unconscious supplies every being in its instinct with what the body needs for self-preservation and for which its conscious thought does not suffice. The unconscious preserves the species through sexual and maternal love, ennobles it through selection in sexual love, and conducts the human race historically, steadily,

to the goal of its greatest possible perfection. The unconscious often guides men in their actions by hints and feelings when they could not help themselves by conscious thought. The unconscious furthers the conscious process of thought by its inspirations in small as in great matters, and in mysticism guides mankind to the presentiment of higher, supersensible unities. The unconscious makes men happy through the feeling for the beautiful and artistic. If we institute a comparison between the conscious and unconscious, it is obvious there is a sphere which is always reserved to the unconscious, *because* it remains for ever inaccessible to the conscious. Secondly, we find a sphere which, in certain beings only, belongs to the unconscious, but in others is also accessible to consciousness. Further, if in man we consider the sphere belonging both to the unconscious and also to consciousness, this much is certain: that everything which any consciousness has power to accomplish, can be executed equally well by the unconscious. This convenience of abandoning oneself to the unconscious is tolerably familiar, hence the conscious use of reason is so decried by the indolent."

The conscious and unconscious contrasted.

"That the unconscious can really outdo all the performances of conscious reason is seen in those fortunate natures that possess everything that others must acquire by toil, who never have a struggle with conscience, because they always spontaneously act correctly with feeling, and can never comport themselves otherwise than with tact, learn everything easily, complete everything they

begin with a happy knack, live in eternal harmony with themselves, without ever reflecting much what they do, or ever experiencing difficulty and toil. The fairest specimens of these instinctive natures are only seen in women. But what disadvantage lies in this self-surrender to the unconscious? This—that one never knows where one is, or what one has; that one gropes in the dark, while one has got the lantern of consciousness in one's pocket; that it is left to accident whether the inspiration of the unconscious will come when one wants it; that one has no criterion but success. The conscious is an ever-ready servant, whose obedience may be always compelled; the unconscious protects us like a fairy, and has always something uncomfortably demoniac about it. I may be proud of the work of consciousness, as my own deed, the fruit of my own hard labour; the fruit of the unconscious is, as it were, a gift of the gods; it can therefore only teach him humility. The unconscious is complete from top to toe, and must therefore be taken just as it is. The *conscious* judges, improves itself, and can be changed any moment; the unconscious leaves no room for improvement." [1]

But before introducing our last example of the value of unconscious mind we must pause a moment here to prevent a possible misunderstanding.

This chapter is not on the value of mind, but of unconscious mind; and it is therefore no part of our province to enlarge upon the value of conscious reason,

[1] Hartmann, *Philosophy of the Unconscious*, vol. ii., pp. 39 and 40. Of course, in the young this last sentence is incorrect.

will and emotion. The reader who forgets this may naturally think that we are seeking to show that all value attaching to mind practically belongs to the unconscious. Such is far from our thought or purpose, and, fairly considered, cannot be laid to the charge of this chapter.

Pre-eminent value of the conscious mind undisputed.

All philosophers, all metaphysicians, all psychologists, all sages in all ages, have sung the praises of their own reason and their own minds. The human mind (conscious *bien etendu*) needs no poor words of ours to sing its powers or its virtues.

Man is pre-eminently a reasonable and a rational being, and by that is meant, not merely that he possesses reason, but that he is able consciously to direct and control it, and hence is a responsible being. The conscious human will and active powers of intellect are, indeed, the arbiters of man's destiny, the source of his supremacy; that part of him surely that is "in the likeness of the Divine," however much the unconscious may be an unseen guide, a faithful and indispensable servant. It is only in insanity, in sleep and in hypnotism that the unconscious mind rules the man; and more need not be said to show the supremacy of consciousness over unconsciousness: and if in any part of this monograph our language, through merely dwelling upon one side of the question, should seem to imply otherwise, let this emphatic declaration restore the balance of truth.

Now, in conclusion, what is the value of the unconscious mind to the *physician?*

We have already spoken of this at some length in the preceding chapters. We have shown how thoroughly and unscrupulously the powers of the mind over the body have been exploited, without perhaps ever knowing it, by the vast army of charlatans, who would have all disappeared long since, and certainly never have been allowed to become a source of revenue to Somerset House, were it not for these powers by which all cures that are genuine have undoubtedly been effected. We fear the recognition of this unpalatable fact will hardly at first make physicians, with a care for their own reputation, over anxious to examine powers that have already been so prostituted. But when they see with increasing clearness, once their minds are directed to it, what a large and quite indefinable number of their own cures would never have been effected either without its agency —sometimes consciously invoked, as in the more intelligent treatment of new diseases; sometimes unconsciously, as in the mental effect of drugs and fees, and the surroundings and appearance and language of the doctor—they find that, whether they will or no, they cannot avoid its use; and this being so, it is as well to study and understand its laws and limitations so as to employ it intelligently and wisely.

Value of the unconscious to the physician, etc.

The value, indeed, of the unconscious mind in therapeutics is undoubtedly so great that it is quite curious to note that it has not yet become, even in our extended medical course, a serious branch of study; and for this undoubtedly psychology with its artificial barriers is

largely responsible. Once these are swept away, and when every psychology finds it necessary to enlarge its definitions of mind, the powers and limitations of the unconscious, physical and psychical, will be seriously treated both by psychologist, physiologist and students and teachers of medicine.

The unconscious mind a master-key to many problems.

We have pointed out the value of the unconscious mind in many directions, and seen how it solves many difficulties, and is the key to many problems. A key may accidentally fit one door of a house, but when it fits them all it may well claim to be a master-key. Such and no less is the unconscious mind to many psychical and physical problems, some, but not all of which we have indicated.

We hope this monograph may be helpful in encouraging further thought and research on this great subject in spite of its many imperfections in matter and style. Many of these are alas! unavoidable, owing to the unexplored nature of the subject. Subsequent travellers will correct, modify and adjust many untenable positions and statements, and discover the natural laws within which unconscious psychic powers have their action and sphere.

There are doubtless, too, many verbal and other inaccuracies that might have been avoided. We only trust that all these and the somewhat popular language in which the whole argument is couched, will turn none aside from the consideration of the truth and practical importance of the questions raised in these pages. Our last word shall be—

"Δοκιμαζετε, τὸ καλὸν κατεχετε".

THE END.

LIST OF SOME OF THE BOOKS QUOTED WHICH ARE HELPFUL IN STUDYING THE SUBJECT OF "THE UNCONSCIOUS MIND".

ABERCROMBIE.—"Intellectual Power."
ALLEN, G.—"Physical Æsthetics."
"Aristotelian Society, Proceedings of."

BAIN, A.—"The Senses and the Intellect."
BAIN, A.—"Practical Essays."
BAIN, A.—"The Power of the Mind over the Body."
BALDWIN, Prof.—"Handbook of Psychology."
BALDWIN, Prof.—"Mental Development in the Child and Race."
BASCOM.—"Comparative Psychology."
BASTIAN, C.—"Brain as an Organ of Mind."
BATEMAN, Dr.—"Practical Symptoms of Cutaneous Diseases."
BEALE, L.—"Matter and Life."
BENEKE.—"Elements of Psychology."
BENNET.—"Mesmeric Mania."
BERNHEIM, H.—"Suggestion in Therapeutics."
BINET.—"Alterations de la Personalité."
BINET.—"Animal Magnetism."
"Book of Health."
BOUNE, Prof.—"Introduction to Psychological Theory."
BOWEN, Prof.—"Modern Philosophy."
BRAID.—"Hypnotism."
BRAID.—"Power of Mind over Body."
"Brain."—Vol. i., etc.
BRODIE, Sir B.—"Psychological Inquiries."
BROWN-SÉQUARD.—"On the Duality of Mind."
BUECHNER, L.—"The Mind in Animals."
BUTLER, S.—"Life and Habit."
BUTLER, S.—"Unconscious Memory."

CALDERWOOD, Prof.—"The Relations of Mind and Brain."
CARPENTER.—"Mental Physiology."
CARTER, Dr.—"Pathology and Treatment of Hysteria."

CLIFFORD, E.—"Seeing and Thinking."
COBBE, F. P.—"Darwinism and Other Essays."
"Contemporary Review."—"The Alternative: Study in Psychology."
COUTTS.—"Brain and Intellect."
CREIGHTON.—"Unconscious Memory."

DENTON, Prof.—"Live Questions in Psychology."
DUNN, R.—"Psychological Physiology."

EDDY, M. B.—"Christian Science."
ELAM, C.—"Psychological Problems."

FERRIER, D.—"The Functions of the Brain."
FORSTER.—"Biblical Psychology."
FOSTER, Sir M.—"Physiology."

GAIRDNER, Prof.—"The Natural Physician."
GALTON, F.—"Inquiry into Human Faculty."
GLEN, J.—"Mind and Body."
GLIDDON.—"Faith Cures."
GORMAN.—"Christian Psychology."
GRATIOLET.—"La Physiognomie."
GREEN, E.—"Memory."

HALLECK, J. R.—"Psychology and Psychic Culture."
HAMILTON.—"Mental Science."
HAMILTON, Sir WM.—"Lectures on Metaphysics."
HARRISON, E.—"A Study of Child Nature."
HARTMANN, ED. VON.—"Philosophy of the Unconscious."
HAUGHTON.—"The Laws of Natural Force."
HEGEL.—"Philosophy of Mind."
HELMHOLTZ.—"Popular Scientific Lectures."
HERBART, F.—"The Science of Education."
HERBERT, Prof.—"Realistic Assumptions of Modern Science Examined."
HERSCHELL, Sir J.—"Lectures on Scientific Subjects."
HOLLAND, Sir H.—"Medical Notes and Reflections."
HOLLAND, Sir H.—"Mental Physiology."
HOLMAN, Prof.—"An Introduction to Education."
HOLMES, O. W.—"Medical Essays."
HOLMES, O. W.—"Mechanism in Thought and Morals."
HOLMES, O. W.—"Pages from Odd Volumes."
HORSLEY, V.—"The Brain and Spinal Cord."
HUDSON, T. J.—"The Law of Psychic Phenomena."
HUXLEY, THOS.—"Science and Culture."

HUXLEY, THOS.—"Essays on Controversial Subjects."
HUXLEY, THOS.—"Lay Sermons."

ILLINGWORTH, I. R.—"Personality, Human and Divine."
IRELAND, W. H.—"Through the Ivory Gate."
IRELAND, W. H.—"The Blot on the Brain."

JAMES, W.—"Principles of Psychology."
JAMES, W.—"Textbook of Psychology."

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KIRKE.—"Physiology."

LADD, G. T.—"Elements of Physiological Psychology."
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LANGE.—"Apperception."
LAYCOCK, T.—"Nervous Diseases of Women."
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LEIBNITZ.—"Philosophical Works."
LEWES, G. H.—"Physical Basis of Mind."
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LINDSAY, Prof.—"Mind in Animals."
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LOTZE, H.—"Mikrokosmos."
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MASON, C.—"Home Education."
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RADESTOCK, P.—"Habit in Education."
REID, Dr. P.—"Inquiry into the Human Mind."
REID, Dr. T.—"On the Intellectual Power."
REID, G. H.—"The Present Evolution of Man."
RIBOT.—"English Psychology."
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RICHARDSON, Sir B. W.—"The Asclepiad."
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INDEX.

ABBREVIATIONS.

C = conscious or consciousness.
U = unconscious or unconsciousness.
M = mind.

ABDOMEN and U. M., 370.
Abdominal tumours and U. M., 397, 398.
Abercrombie on sleep and U. M., 167.
Acquired reflexes, 123, 124, 125.
Action of U. M., 102, 103.
Actions, varieties of, 121.
Adaptation in insects, 19.
Admission of U. M., 44, 45, 80, 81, 83.
Agent in all cures, 334.
Ague cured by charms, 385.
Allbutt, Dr. C., on granular kidney and anxiety, 356.
— on atheroma and anxiety, 359.
Amœbic intelligence, 11, 13.
Anæmia and U. M., 358.
Anasarca and U. M., 357.
Anger in infancy, 181.
— and death, 362.
Angina and emotion, 359.
Animal instinct, 17-21.
Animals as machines, 9.
— not machines, 11.
Answers to queries on sleep and U.M., 164, 165.
— — on U. M., 108, 109.
Ant, brain of, 17.
— instinct of, 17.
Antiquity of cures by suggestion, 363.
— of mental therapeutics, 363.
Apoplexy and U. M., 358, 360.
Apperception, 151-155.
— in childhood, 219, 220.
— value of, 154, 155.
Arcs of nerves in brain, 33, 125, 126.
Arguments against U. M., 402.
Aristotelian Society admits U. M., 45.
Arnold, Matthew, on methods of education, 202.
Assertion of U. M., 84-89.
Atheroma, U. M., 358, 359.
Atmosphere, mental, 205.
Attitudes and U. M., 303.

BABIES and U. M., 317.
Bacon, Lord, on involuntary muscle action, 305.
Bad habits, 144.
Bain, Dr. A., admits U. M., 44.
— on C. and feeling, 66.
— on hypnotic trance, 271.
— on memory, 157.
— on M. and brain, 27.
— on muscles and U. M., 300, 304.
— on physical cost of C., 65.
— on U. vision, 272.
Baker, Sir S., on fever from grief, 356.
Baldwin, Prof., on C. in childhood, 178.
— on degrees of C., 58.
— denies U. M., 78.
Barker, Prof., on M. and life, 10.
Barrett, Prof., on animal mimicry, 19, 313.
— on Jacob's striped cattle, 323.
— on powers of U. M., 39.
— on sleep and U. M., 161.
— on spiritual side of U. M., 92
— on stigmata and suggestion, 312.
Bascom, Prof., asserts U. M., 88.
— on C., 60.
— on C. and U. M., 105, 113.
Bastian, C., asserts U. M., 48, 49, 87.

Bateman, Dr., on anasarca and grief, 357.
Battey on paralysis by idea, 355.
Beauty and U. M., 321.
Beer, Prof., on vision, 269.
Bennet, Prof., on sensation by ideas, 246.
Beneke, Prof., admits U. M., 45.
— on C., 60.
Bergson on hypnotic vision, 273.
Bernheim on hysterical retention, 353.
Bettman, Dr. S., on U. hearing, 283.
Biener, Prof., on hysteria, 355.
Binet on hysteria and fancy, 347.
— on mental therapeutics, 366.
— on muscles and U. M., 299.
— on U. M. and vision, 272, 274.
— on voluntary and involuntary muscles, 298.
Biology and U. M., 407.
Birds, instinct in, 18.
Blushing and U. M., 311, 312.
Body and U. M., 204, 252-265, 410.
Bones and U. M., 368.
Boune, Prof., denies U. M., 72.
— on value of U. M. in disease, 374.
Bowen, Prof., on memory, 97.
Braid on hypnotism, 259, 260.
— on sensation by ideas, 246, 247, 248.
Brain activity and urea, 356.
— cell action in, 30.
— in childhood, 169, 171, 172.
— description of, 29.
— and heredity, 172.
— in infancy, 169.
— and mind, 170, 173.
Bramwell on U. M. and vision, 275.
Breathing consciously, unnatural, 314.
— and mind action, 314.
British Medical Journal on mental therapeutics, 337.
Brodie, Sir B., on C. and U. M., 111.
— on vision, 259.
Browne, Sir J. C., on education of the senses, 217.
— on education of U. M., 192, 206.
— on mental therapeutics, 375.
— on mind and brain, 27.
— on mind and matter, 3.
Brown-Séquard on death from emotion, 362.
Bruce, Dr. M., and visions, 268.
— on *vis medicatrix naturæ*, 367, 368.
Brunton, Dr. L., and vision, 268.
Buckley, Dr., on rheumatism and shock, 382.
Burton on mental therapeutics, 368.

Calderwood, Prof., on sleep and U. M., 161.
Cancer and U. M., 357.
Carpenter, Dr., admits U. M., 46, 81, 115.
— on body and U. M., 253.
— on cures by Chas. II., 383.
— on cure by expectation, 366.
— on death from grief, 361.
— on education of U. M., 210.
— on mind and poison, 7.
— on muscles and emotion, 306.
— on muscles and U. M., 296.
— on paralysis and emotion, 306.
— on speech and U. M., 292.
— on walking and U. M., 304.
Cartesian clocks, the two, 3.
Cell action and mind, 7, 30.
Cerebellum and U. M., 300.
Character in mind, 7.
Charcot on hysterical paralysis, 354.
Charm cures, 333, 385.
Cheerfulness and disease, 371.
Child, Prof., on C. and U. M., 108, 109.
— on sleep and U. M., 164, 165.
Childhood, apperception in, 219.
— brain in, 169.
— happiness in, 196, 197.
— imagination in, 220.
— mental development of, 179-183.
— romance of, 220.
— special senses in, 176.
— and U. M., 169-186.
Children, education of, 169-236.
— punishment of, 227.
Chiniquy, Pastor, and mental therapeutics, 380.
Cholera and U. M., 357.
Christian science, 329, 387.
Christianity and U. M., 405.
Churton, Dr., on jaundice from anxiety, 357.
Circulation and emotion, 308, 309.
— and fear, 310.
— and suggestion, 310.
— and U. M., 411.
Clark, Sir A., on mental therapeutics, 374.
Classes of actions, 121.
Clauston, Prof., on body and U. M., 255.

Clifford, Prof., admits U. M., 84.
— on relation of mind and matter, 5.
Clock in nursery, value of, 379.
— therapeutic value of, 377.
Clouston, Prof., on mind and disease, 368, 370.
Cobbe, F. P., on dreams and U. M., 163.
— on mind and body, 340.
— on sensation by memory, 248.
Coleridge on sleep and U. M., 167.
Colquhoun on antiquity of mental therapeutics, 363.
Compensation in heart disease, 370.
Concept of mind, 1.
Conscious education, future of, 189.
— education, hints on, 232-6.
— ideas not hysteric, 346.
— mind, 52-71.
— mind, value of, 61, 62, 416.
— self, not all, 69.
— sight, 266.
— suggestion, 380.
— and U. M., 98-120.
Consciousness and apperception, 152, 153.
— degrees of, 57, 58, 59.
— and discrimination, 67.
— and ego, 68.
— and habit, 139, 140.
— how produced, 65.
— inner, 150.
— not permanent, 60.
— not reliable, 62.
— often an effort, 67.
— physical basis of, 63, 64.
— physical cost of, 65.
— secondary, 69.
— and spectrum, 93, 94.
— and U. M., 100-114, 412.
— varies, 56.
— what it is, 53-56, 63, 64.
Constipation cured by the clock, 379.
Consumption and U. M., 368.
Cortex, description of, 30.
— power over life, 341.
Creighton on C. and U. M., 113.
— on memory, 159.
Crystal gazing and U. M., 279.
Cures, the agent in all, 334.
— by charms, 333, 385.
— by Christian science, 386.
— by expectation, 366.
— by faith healing, 332, 333.
— by fear, 392.
Cures by homœopathy, 331, 391.
— by hydropathy, 331.
— by hypnotism, 330.
— by hysteria, 349, 399, 400.
— by idols, 333.
— by insects, 392.
— by Lourdes, 332, 385, 387.
— by love, 393.
— by magnetism, 383, 384, 392, 393.
— by Mattei, 331, 391.
— by mesmerism, 384.
— by mineral waters, 334.
— by quackery, 327.
— by relics, 333.
— by Salvation Army, 388.
— by suggestion, 367, 391, 392, 393, 400.
— by thermometer, 392.
— by touch, 383.
— and U. M., 334, 335, 366, 386, 391, 397-399.

Darwin on instinct, 16.
Davidson on C., 54.
Davy, Sir H., on cure by thermometer, 392.
Dawson, Sir Wm., on amœbic intelligence, 13.
Day dreams and vision, 271.
Death from anger, 362.
— from depression, 361.
— from emotion, 361, 362.
— from fright, 361, 362.
— from grief, 361.
— from hysterical spasm, 353.
— from shock, 308, 360, 361.
— from U. M., 262, 308, 360, 361, 362, 374.
— from will power, 362.
Degrees of U., 98, 99, 100.
Denial of U. M., 72-80.
Depression and death, 361.
— and disease, 361.
Dercum, Prof., on sleep, 162.
Diabetes and U. M., 356.
Discipline and education, 207.
Discrimination and C., 67.
Diseases cured by mental therapeutics, 341.
— and Christian science, 387.
— and depression, 361.
— and emotion, 358.
— functional and organic, 331.
— and habit, 353.
— and hysteria, 316.

Diseases and imagination, 340, 347, 371.
— and suggestion, 367.
— and U. M., 325-351, 353, 354, 367, 370, 374, 387.
Dogs, instinct in, 21.
Drawbacks of habit, 142, 143.
Dreams and U. M., 163.
Dropsy cured by fear, 392.
Drugs and mental therapeutics, 375, 391.
Drummond, Prof., on insect adaptation, 19.
Drunkenness, phenomena of, 126, 127, 128.
Duckworth, Sir D., on clock and vomiting, 377.
Dunn, Dr. R., on life and organism, 6.
Durand, Dr., on vomiting by suggestion, 360.

Ease and habit, 134, 135, 141.
Eddy, M. B., and Christian science, 329, 387.
Education of the C., 188.
— of the C. M., hints on, 232-236.
— by discipline, 207.
— by environment, 211-217.
— by example, 228, 230, 231.
— failure of C., 189.
— by habit, 222.
— and heredity, 202, 203, 221.
— by ideas, 218, 219.
— and life, 208, 228.
— by mental atmosphere, 205.
— natural, 191.
— three varieties of, 193.
— of U. M., bad, 201.
— of U. M. before birth, 210.
— of U. M. detailed, 210-236.
— of U. M., importance of, 187.
— of U. M., methods of, 202.
— of U. M., principles of, 187-209.
— of U. M., results of, 209.
Ego and C., 68.
Elephants, instinct of, 22.
Emotion and angina, 359.
— and circulation, 309.
— and death, 361, 362.
— and disease, 358.
— effect of, on muscles, 306.
— and heart, 309.
— in infancy, 182.
— and paralysis, 354.
— and respiration, 314.
Environment and education, 211-217.
— how it educates, 217.
Evison, G., case of restored eyeballs, 388.
Eyeballs restored by faith, 388.
Eye disease cured at Lourdes, 387.
Eyesight restored by faith, 389.
Expectation and cure, 375.

Facial expression and U. M., 259.
Fæcal vomiting and U. M., 358.
Failure of C. education, 189.
Faith cures and medical men, 338.
— healing, 330, 375, 385, 388, 389.
— — in England, 332, 333.
— — and mental therapeutics, 364.
Familiar objects and U. vision, 281.
Fear and U. M., 262.
— and dropsy, 392.
— in infancy, 180.
— and paralysis, 392.
— and typhoid fever, 381.
Feelings not sensations, 243.
Féré, Dr. C., on influence of sex on muscle power, 307.
— on muscles and U. M., 296.
Ferrassi and charm cures, 385.
Ferrier, Dr., admits U. M., 48.
Fever from grief, 356.
Fistula, formation of, 315.
Fits and U. M., 261.
Force of habit, 130.
Ford, Prof. A., on headaches and suggestion, 376.
— on illness prolonged by suggestion, 377.
Formation of habit, 124, 131, 132.
Foster, Sir M., on U. M. and body, 204.
— on C. sensations, 66.
Free will, on, 35.
Fright producing idiocy, 354.
— and rheumatic fever, 328.
Functional and organic disease, 331.

Galton, F., asserts U. M., 85.
— on degrees of C. 58.
— on C. and U. M., 110.
Gastric ulcer and suggestion, 377.
Gerbe, Dr. R., on cure by insects, 392.
Gestures from U. M., 262, 263, 264.
Gowers, Sir W. R., on nerve currents, 33.
Granville, Dr. M., on mental therapeutics, 339.
Grave's disease and U. M., 358.
Green, Dr. E., on memory, 157, 158.

Gregory, Prof., on temperature in hypnotism, 315.
Gullet, hysterical spasm of, 353, 398.

Habits, bad, 144.
— and C., 139, 140, 141.
— and disease, 353.
— drawback of, 142, 143.
— and ease, 134, 135, 141.
— and education of U. M., 222.
— force of, 130.
— formation of, 124, 131, 132.
— and instincts, 130.
— in man, 129.
— in organic world, 129.
— mental, 136.
— physical basis of, 133, 136.
— special, 223.
— of thought, 128, 225, 226.
— and U. M., 121-145, 208, 295.
— value of, 134, 140, 141.
— when to form, 224.
— and the will, 137, 138.
Hæmoptysis and U. M., 356.
Hair and U. M., 263, 316.
Hamilton, Sir W., admits U. M., 45.
— asserts U. M., 55.
— on C. and U. M., 106.
— on degrees of U., 98, 100.
Hand, position of, and U. M., 353.
Happiness in childhood, 196, 197.
Hartmann, E. von, on beheaded frogs, 17.
— on body and U. M., 252, 254.
— on C. and U. M., 101, 112.
— on formation of fistulæ, 315.
— on infectious diseases and fear, 357.
— on instinct, 23.
— on mucous membrane changed to epithelium, 315.
— on muscles and U. M., 297, 302.
— on monogamy, 320.
— on powers of U. M., 118.
— on purposive movements, 82.
— on sex and U. M., 319, 413.
— on U. M., 38, 39, 413, 414.
— on U. sensations, 244.
— on vital mechanism, 10.
— on voluntary and involuntary muscles, 362.
Haughton on mind and body, 263.
Hay fever and U. M., 314.
Headache and U. M., 376.
Healing by faith, 330.
Hearing in infancy, 179.
Hearing and U. M., 284-290.
Heart disease and depression, 376.
— failure by mental shock, 308.
— and U. M., 308-313, 370, 376.
Hell, Father, and magnetic cures, 383.
Helmholtz asserts U. M., 84.
Hemispheres, why two, 30.
Herbart asserts U. M., 86.
— on education by example, 228, 229.
Herbert, Prof., on faith and food, 5.
Heredity and brain, 172.
— and education, 202, 203. 221.
— and memory, 158, 175.
— and U. M., 409.
Hering denies U. M., 80.
Herschell, Sir J., asserts U. M., 86.
Hill, Dr. A., on heredity and habit, 172.
— on sensation and C., 238.
Hippocrates on *vis medicatrix naturæ*, 368.
Hobbs on U., vision, 272.
Holman, Prof., on C. education, 234.
— on education of U. M., 210.
— on education and environment 212.
— on mind in childhood, 175.
Holmes, O. W., asserts U. M., 87.
— on C. and U. M., 105, 107, 110.
— on ideas and U. M., 148.
— on *vis medicatrix naturæ*, 360.
Homœopathic cures, 301.
Hope and heart disease, 376.
Huber on ants, 17.
Hughes, Prof., on disease and imagination, 317.
Hume on muscles and U. M., 303.
Hunter, J., on anguish and emotion, 359.
— and emotional heart action, 309.
— on mind and body, 372.
— on sensation by ideas, 245.
Hutchinson, J., on saliva and shock, 318.
Hutton on disease and U. M., 76.
— on memory, 157.
Huxley on reflex action, 295.
— on science and religion, 236.
Hydropathic cures, 331.
Hypnotic vision, 273.
Hypnotism, Braid's experience, 259, 260.
— cures, 330.
— and organic action, 369.
— phenomena of, 257, 258, 259.
— and temperature, 315.

Hypnotism and trance, 271.
— and U. hearing, 286.
— and U. M., 316, 407.
— and vision, 271, 272, 273.
Hysteria, causes of, 393, 394.
— cure of, 349, 399.
— and electricity, 350.
— has its seat in the U. M., 348.
— how produced, 342.
— and mental therapeutics, 349.
— and mind, 394.
— and nitrogen, 349.
— not malingering, 347, 348.
— and pain, 343.
— and paralysis, 354, 396.
— and retention of urine, 353.
— and special senses, 396.
— and suggestion, 350.
— and tumours, 396.
— and U. M., 258, 355.
Hysterical diseases, 316, 353, 354, 355, 394, 396.

Ideal sensation, 245, 247, 248, 250.
Ideas, influence of, in education, 218.
— produce feelings and acts, 346.
— and U. M., 146-150.
Idiocy from fright, 354.
Idol cures, 333.
Illustration of vision and U. M., 278, 279.
Imaginary cures and mental therapeutics, 372.
Imagination in childhood, 220.
— and disease, 371.
— produces real disease, 347.
Imitation in infancy, 182.
Immunity of medical men, 372.
Indian juggler and U. M. vision, 276.
Individual and U. M., 409.
Infancy, brain in, 169.
— development in, 179-183.
— and will, 177.
Infectious disease and U. M., 357.
Inflammation caused by U. M., 257.
— and U. M., 311, 312.
Influence of ideas in education, 218.
— of mind on body, 263.
— U., 157.
Infusorial intelligence, 11.
Inner C., 150.
Inorganic habit, 129.
Insect intelligence, 15.
Instinct in birds, 18.
— in dogs, 21.
— in elephants, 22.
Instinct in fish, 15.
— formation of, 14.
— and habits, 130.
— and intelligence, 16.
— in U. M. action, 23.
Interaction of M. and body in disease, 340.
Ireland, Dr., denies U. M., 76.
— on U. cerebration, 79.

Jackson, Dr. H., on speech and U. M., 291.
James, W., on M. and matter, 4.
— on psychology, 24, 26, 404.
— on U. sensations, 242.
Jaundice and U. M., 316, 318.
Jekyll and Hyde and U. M., 406.
Jessen on C. and U. M., 104.

Kames, Lord, on sleep and U. M., 167.
Kant admits U. M., 84.
— on ideas and U. M., 146.
— on U. M. powers, 84.
Kidney, granular, and U. M., 356.
Kingsley, C., reproduction and U. M., 320, 323.
— on spiritual side of U. M., 93.
Kirchener, F., on C. and U. M., 110.
— denies U. M., 77.
— on discrimination, 67.
— on life and organism, 7.
Koch's tuberculin and suggestion, 310.
Kroomen and death from will power, 362.

Labour and the clock, 378.
— and U. M., 378.
Ladd, G. T., denies U. M., 73.
— on ideas and U. M., 147.
— on value of U. M., 116.
Lancet, death from shock, 360.
— on faith healing, 364, 393.
— on mental therapeutics, 365, 371.
Lane, W. A., on design in rickets, 369.
Lange, Dr. K., on apperception, 152-155.
— on education and environment, 212.
Laura, Signor, on death from emotion, 361.
Laycock, Dr. T., asserts U. M., 55.
— on C., 54.
— on organic action in hypnotism, 369.
— on power of cortex, 341.
Lazarus admits U. M., 47.
— on apperception, 153.

Leibnitz asserts U. M., 84.
Leith, Dr., on Nauheim and mind influence, 309.
Lewes, G. H., admits U. M., 47, 48.
— asserts U. M., 85, 87.
— on C., 53.
— on C. and U. M., 106.
— on formation of habit, 131.
— on habit, 295.
— on muscles and U. M., 297.
— on psychology, 25.
— on U. M. hearing, 286.
— on visual phenomena, 269.
Life and education, 208.
— and mind, 6.
Lindsay, Prof., on insect intelligence, 15.
Liver and U. M., 317.
Livy and faith cures, 385.
Locke on education by habit, 222.
Lourdes, cures at, 332, 385.
Lowe, Dr., on reproduction and U. M., 321.
Lys, Dr., on apoplexy, anæmia, atheroma and U. M., 350.
— on death from anger, 362.
— on dilated heart and U. M., 358.
— on Grave's disease and U. M., 358.

Mackenzie, Dr. S., on pernicious anæmia and U. M., 359.
Magnetism, cures by, 384.
Mahers and consciousness, 53.
Malebranche on emotion and heart action, 309.
Man, mind below, 1-23.
— and the U. M., 413.
Mason, Ch., on education by habit, 222.
— on education by ideas, 218, 219.
— on punishment, 227.
— results of education and U. M., 209.
Matter and U. M., 80.
Maudsley, Dr., on apperception, 156.
— asserts U. M., 87.
— on attitudes and U. M., 303.
— on body and U. M., 252.
— on C., 55.
— on C. and ego, 69.
— on C. and U. M., 107, 113.
— on degrees of C., 57.
— on degrees of U., 99.
— on ideas and U. M., 146, 147, 148, 149.
Maudsley, Dr., on mental therapeutics, 339.
— on mind action, 8.
— on mind in animals, 21.
— on memory, 158.
— on powers of U. M., 118, 119.
— on sensation and C., 238.
— on sex and U. M., 319.
— on speech and U. M., 292.
— on U. M., 43.
— on U. sensations, 244.
— on value of C., 61.
— on voluntary and involuntary muscles, 298.
Medical men and faith cures, 338.
— — and immunity from infection, 372.
Medecine, psychic factor and experiments, 326.
— switchback, advance of, 326.
Medulla, description of, 29.
Memory hereditary, 158, 175.
— physical seat of, 158.
— and U. M., 155, 156, 157, 159, 160.
— wonders of, 97.
Mental atmosphere, 205.
— development of children, 178-183, 184, 185.
— habits, 136.
— powers, 36.
— therapeutics, 337-339, 362, 364, 365, 366, 371, 374, 375.
— — advance in, 337.
— — antiquity of, 363.
— — applied in three ways, 341.
— — and the clock, 377, 379.
— — and drugs, 375.
— — evils of not teaching, 337.
— — and experiments, 326.
— — and faith healing, 364.
— — and hysteria, 349.
— — and imaginary cures, 372.
— — and nervous diseases, 338.
— — and nitrogen, 349.
— — and the physician, 335.
— — and quacks, 327, 338, 339, 363, 365.
— — and typhoid, 380, 381.
— — unconsciously used, 373.
— — and warts, 383.
— — why ignored, 335, 336.
Mercier, C., on production of C., 65.
— on sensory paths, 241.
Meredith, Mrs., on heredity and education, 221.

Mesmer, cures by imagination, 383.
Mesmerism, cures by, 383, 384.
Metaphysics and U. M., 405.
Methods of education of U. M., 202.
Mid-brain, description of, 29.
Mill, Jas., on M., 41.
— on sensation and C., 238.
Mill, Jno. S., partly admits U. M., 80.
— on sensation and C., 237.
Mimicry in animals, 313.
— and U. M., 263.
Mind arresting sensation, 249.
— below man, 1-23.
— and body, 258, 340.
— — their interaction in disease, 340.
— and brain, 27, 28, 170, 173.
— and cell action, 7.
— and childhood, 174.
— concept of, 1.
— C., 52-71.
— C. and U., 98-120.
— cures and organic disease, 338.
— and disease, 368, 372, 374.
— has no extension, 4.
— in all animal life, 10.
— includes U. M., 43, 252.
— and life, 6.
— in man, scope of, 24, 251.
— limited to C., 40, 41.
— and matter, relation of, 2, 3, 4, 5.
— physical basis of, 173, 174.
— producing fever, 356.
— and protoplasm, 8.
— and purposive movement, 6.
— and secretions, 352.
— U., 72-97.
Modesty and U. M., 318.
Monogamy and polygamy, 320.
Montgomery, E., against mechanical views of C., 66.
— on C., 60.
— on C. and U. M., 105, 111.
— denies U. M., 74.
— on free will, 35.
— on muscles, 295.
— on powers of sensation, 239.
— on psychology, 25.
— on U. M., 296.
Moral sense in infancy, 183.
Morrison, Dr. A., on heart disease and mental distress, 376.
— on mental therapeutics, 374, 375.
— on mind in disease, 374.
Murchison, Dr., on cancer and grief, 357.
Murchison, Dr., on liver and mind influence, 317.
Muscle action, involuntary, 305.
— — in sleep, 303.
— — stopped by U. M., 306, 307.
— — and table turning, 307.
— — U. and thought readers, 307.
— power and sex, 307.
— and U. M., 294, 307.
Muscles, 295.
— voluntary and involuntary, 298, 299, 300, 302.
Muscular inco-ordination and U. M., 360.
Müller's law and organic action, 370.
— on muscles and U. M., 297.
Myers, Dr., asserts U. M., 89.
— on mental therapeutics, 371.
— on secondary C., 69.

Natural reflexes, 122, 123.
Nature's education, 191.
Nauheim and U. M., 309.
Nausea by idea, 345.
Neale, Dr., on reproduction and U. M., 323.
Nerve arcs, 33, 125, 126.
— currents in brain, 333, 334.
— diseases and mental therapeutics, 338.
Neuron, structure of, 31, 32, 171.
Newman, Cardinal, on C. and U. M., 100, 113.
Niemeyer on education by habit, 222.
Nitrogen and hysteria, 349.
— and mental therapeutics, 349.
Nursery and the clock, 379.

Old age, value of clock in, 379.
Organic action and Müller's law, 370.
— — and U. M., 369.
— disease and mind cures, 338.
— — and U. M., 356.
— and functional disease, 331.
Ovum, human, 321.

Paget, Sir G., cancer and anxiety, 357.
— Sir J., hæmoptysis of mental origin, 356.
— on saliva and suggestion, 317.
Pain by association, 345.
— and hysteria, 343.
— by nerve transference, 344.
— referred to origin of nerve, 344.
Paralysis cured by fear, 392.
— cured by loss, 393.

Paralysis and emotion, 354.
— hysterical, 354, 355, 396.
— and U. M., 306, 393, 396.
Paré and *vis medicatrix naturæ*, 368.
Parents as inspirers, 331.
— and U. M., 408.
Parker, Prof., on instinct and intelligence, 16.
Pears' soap and U. vision, 280.
Peristalsis reversed by U. M., 359.
Perkin, A. B. D., cures by magnetic tractors, 384.
Pflüger on C., 13.
— on C. and U. M., 101.
— on sensation and C., 237.
Phenomena of hypnotism, 257-259.
Philosophy and U. M., 405.
Phthisis and U. M., 315.
Physical basis of habit, 133.
— basis of mind, 83, 174.
— cause of sleep, 162.
— habits, 136.
Physician and mental therapeutics, 335, 417.
Physiology and U. M., 410.
Pills and U. M., 259, 316.
Plato on education in childhood, 210.
— on education by example, 228.
Pliny on cures for sciatica, 35.
Pollock, Dr. J., on education and U. M., 191, 192.
— on environment and education, 212.
— on mental atmosphere, 205.
Polygamy and monogamy, 320.
Porter, Dr. Noah, on body and U. M., 255.
— on discrimination, 67.
— on instinct, 20.
Power of mind, 36.
— of U. M., 37, 38, 39, 117, 118.
— of U. M. over body, 204.
Preyer on discrimination, 234.
— on education and heredity, 202.
— on education by ideas, 219.
Pre-natal impressions, 322, 323.
Prince, Dr., on hay fever and suggestion, 314.
Protection by leucocytes, 370.
— in rickets, 359.
Protective mechanism in abdomen, 370.
Protoplasm and mind, 8, 9.
Psychic nature of reflex action, 301.
Psychical Research Society and second sight, 269.
Physical Research Society on temperature and suggestion, 310.
Psychism in medicine, 326.
Psychology, definition of, 24, 25.
— present state of, 403, 405.
Psychology and U. M., 405.
Pulse and mind, 310.
Punishment of children, 227.

QUACKS and mental therapeutics, 327, 338, 339, 363.
— and their cures, 327.
— and U. M., 363, 365.
Qualities of U. M., 146-168.
Quaternions, discovery of, 113.
Queries on sleep and U. M., 164, 165.

RADESTOCK, P., on education and environment, 214.
— on U. vision, 272.
Railroad of habit, 222.
Range of U. M., 117.
Raymond, Du Bois, on the ant's brain, 17.
Reflex, acquired, 123, 124, 125, 295.
— action, 295.
— psychic nature of, 301.
— natural, 122, 123.
— not reflected, 123.
Relations of mind and matter, 2.
Relic cures, 333.
Religion and science, 236.
Reproduction and U. M., 320, 321, 322, 412.
Respiration and emotion, 314.
Results of education of U. M., 209.
Retention of urine relieved by sound, 353.
— hysterical, 353.
Reynolds, Dr. R., on cures for hysteria, 400.
— on paralysis agitans, 354.
Rheumatic fever and fright, 382.
— and U. M., 382.
Rheumatism cured by shock, 382.
— and U. M., 306.
Ribot asserts U. M., 87.
— on cerebellum and U. M., 300.
— on C. and U. M., 106, 113.
— on ideas and U. M., 150.
— on powers of U. M., 38, 39, 42.
Richardson, Sir B. W., on diabetes, 351.
— on mental origin of disease, 359, 360.
— on mind and death, 374.

Richardson, Sir B. W., on pulse and mind, 310.
— on skin eruptions and mind, 359.
— on *vis medicatrix naturæ*, 367.
Rickets and U. M., 369.
Roberts, Dr. G., on mental therapeutics used unconsciously, 373.
Rolleston, Prof., on disease and depression, 361.
Romance of childhood, 22.
Romanes on evolution in animals, 20.
— on infusoria, 11.
— on instinct in fish, 15.
— on instinct in wasps, 17.
— on mind, 9.
Rosmini on C. and U. M., 104.
Rousseau on education by habit, 222.
Royce, Prof., denies U. M., 75.
Rush, Dr., on mental therapeutics, 375.

St. Francis d'Assisi and inflammation, 312.
Saliva and U. M., 353.
Salivary secretion and U. M., 317, 318.
Salvation Army and faith cures, 388, 389.
Schelling asserts U. M., 84.
— on speech and U. M., 291.
Schopenhauer on sex and U. M., 319.
Sciatica, cure by Etruscan spells, 385.
Science and religion, 236.
Scope of mind enlarged, 49, 50, 52.
— — in man, 24-51.
Scripture, Prof., on U. M. and vision, 275.
Scurvy cured by faith, 391.
Seat of hysteria in U. M., 348.
Second sight, 269.
Secretion affected by M., 352.
— affected by U. M., 257, 321, 353.
— of milk and U. M., 321.
— of saliva, 317.
Sensation and C., 66.
— and feelings, 243.
— produced by memory, 248.
— — abnormally, 245.
— — by ideas, 245, 247, 248, 250.
— stopped by mind, 249.
— U., 241.
— and U. M., 237-251.
Sensory paths, 239, 240.
Sex and U. M., 318, 319, 324.
Shame and U. M., 318.
Shock and diabetes, 356.
Shooting and U. vision, 282.
Sickness cured by loss of teeth, 316.
— and U. M., 317.
Sight, C., 266.
— in infancy, 179.
— and U. M., 266-283.
Skin eruption and U. M., 359.
Sleep, muscle action in, 303.
— physical cause of, 162.
— and U. M., 161, 163-168.
Smell in infancy, 180.
— and U. M., 290.
Smith, Dr. Pye, and *vis medicatrix naturæ*, 367.
Snow, Dr., on cancer caused by anxiety, 357.
Spasm of gullet and U. M., 353, 398.
Soury on protoplasm and mind, 8.
Southenbourg and magnetic cures, 384.
Special habits, 223.
— senses in childhood, 176.
Spectrum and C., 91, 94.
Speech and U. M., 288, 291-293.
Spencer, H., admits U. M., 83.
— on apperception, 156.
— on artificial reflex, 295.
— on bad U. education, 201.
— on education, 188, 189.
— on heredity and education, 203.
— on instinct, 20.
— on mind and brain, 27, 28.
— on muscles, 295.
— on ovum, 321.
— on U. education, 198, 199, 200.
— on U. M. action, 14.
Spiritual side of U. M., 92, 93, 94, 95.
Stevenson, R. L., on sleep and U. M., 166.
Stewart, Sir F. G., on heart disease and hope, 376.
Stigmata and U. M., 312.
Stivelly, Prof., on visual phenomena, 270.
Stokes, Dr., on cholera and fear, 357.
Stout, G. F., admits U. M., 46.
Suggestion, evil of bad, 377.
— and headache, 376.
— in hysteria, 350.
— in labour, 378.
— in typhoid, 381.
Sully, Prof., asserts U. M., 87.
— on C., 56, 60.
— on C. and U. M., 106.
— denies U. M., 74, 80.
— on feelings and sensations, 243.
— on ideas and U. M., 150.

Sully, Prof., on mental development in children, 184.
— on muscles and U. M., 302.
— on physical basis of mind, 83.
— on vivid vision and time, 283.
Summary of value of U. M., 119, 120.
Sweetser, Dr., on death from fright, 361.
Sydenham and *vis medicatrix naturæ*, 368.

TABLE turning and U. muscle action, 307.
Taste in infancy, 180.
— and U. M., 288, 289.
Taylor, I., on speech and U. M., 293.
— on education by ideas, 219.
Teachers and U. M., 408.
Teeth lost curing sickness, 316.
Temperature and U. M., 310.
Therapeutic value of the clock, 377.
Therapeutics and U. M., 352-401.
Thermometer, cure by, 392.
Thompson, Dr. G., admits U. M., 80, 89.
— on value of U. M., 91.
— on writing and U. M., 302.
Thompson, Prof. W. H., on amœbic intelligence, 11.
Thought, habit of, 225, 226.
Thought readers and U. muscle action, 306.
Toothache cured by insects, 292.
Touch and U. M., 290.
— in infancy, 179.
Tracey on origin of will, 177.
Transference of vibration, 289.
Tuke, H., on apoplexy from shock, 360.
— asserts U. M., 86
— on blushing, 311.
— on body and U. M., 253.
— cures warts, 383.
— on death from shock, 361.
— on emotion and circulation, 308.
— on fear and circulation, 310.
— on idiocy from fright, 354.
— on inflammation and fear, 311.
— on jaundice and anger, 316.
— on M. and phthisis, 315.
— on muscles and U. M., 297.
— on rheumatism from shock, 306.
— on sensation, 268.
— on sensation by ideas, 246.
— on U. M. and vision, 275, 276.
— on voluntary and involuntary muscles, 298.
Tumours and U. M., 396, 397.
Turner, Sir W., on association centres, 170.
— on brain paths, 171.
Typhoid fever and fear, 381.
— — and U. M., 380, 381.

UNCONSCIOUS education of U. M., 190.
— influence, 151.
— memory, 159, 160.
— mental therapeutics, 373.
— M., 72-97.
— sensations, 241.
— sight, 266.
Unconsciousness by suggestion, 393.
Urea and brain activity, 356.

VALUE of habit, 134, 140, 141.
— of U. M., 90, 92, 95, 115-120, 402-418.
Varicose veins cured by Christian science, 386.
— — cured at Lourdes, 385.
Varieties of education, 193.
Vibration, transference of nerve, 289.
Vision and day dreams, 271.
— and familiar objects, 281.
— (U. M.) and shooting, 282.
— and U. M., 269, 272, 274, 275, 276, 278-282.
Vis medicatrix naturæ, 365, 367, 368.
— — denied, 367.
Visual phenomena from blows, 268.
— — from drugs, 268.
— — and hypnotism, 272, 273.
Vital action not mechanism, 10.
Vivid vision decreases with time, 283.
Voice, loss of, and U. M., 399.
Vomiting and the clock, 378.
— (fæcal) and U. M., 358.
— and U. M., 360, 399.

WALDSTEIN, Dr., on C. and U. M., 113.
— on education and heredity, 203.
— on U. M. and hearing, 286.
— on U. sensations, 242.
— on value of U. M., 115.
Walking and U. M., 304.
Walsh, Dr., on death from depression, 361.
Ward, James, asserts U. M., 88.
— on C., 53.
— on C. and U. M., 105.
Warts and U. M., 383.
Wasps, instinct of, 17.

Water falling relieving the retention of urine, 353.
Watson, Sir T., on jaundice and fear, 318.
Wheatstone, Sir C., on vision and U. M., 280.
Whewell admits U. M., 84.
White, Dr., admits U. M., 47.
Whittaker, Prof., on degrees of C., 59.
— asserts U. M., 88.
Whooping cough cured by beating, 382.
Wilks, Dr., on jaundice from emotion, 357.
Will and habit, 137-138.
— in infancy, 177.
— Is it free? 35.
— origin of, 177.
— power and death, 362.
Working of U. M., 96.
Writing and U. M., 302.
Wundt on body and U. M., 255.
— on C. and U. M., 101, 111.
— on U. sensations, 244.

Ziehen on M., 40, 41.
Zöllner on vision and U. M., 280.

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